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The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

THE WEEK'S NEWS INTERPRETED

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VOLUME 77 JUNE 10, 1935 NUMBER 13

What his HORSE meant to the TEXAS COMANCHE

THE COMANCHE
"lived on horseback"

The Comanche of West Texas, according to George Catlin, noted traveler among the Indians, were the most extraordinary horsemen to be found on the continent.

"Amongst their feats," he wrote, "there is one that has astonished me more than anything of the kind I have ever seen—a stratagem practiced by every young man, by which he is able to drop his body upon the side of his horse, effectually screened from his enemies, with his heel hanging over the horse's back. . . . In this wonderful condition he will hang whilst his horse is at fullest speed, carrying with him his bow and his shield and his long spear, all or either of which he will wield upon his enemy, rising and shooting his arrows over his horse's back, or with equal ease under the horse's neck. . . . I found that a short hair halter was passed around under the neck of the horse and both ends tightly braided into the mane, leaving a loop to hang against the breast, which being caught in the hand makes a sling into which the elbow falls, taking the weight of the body on the middle of the upper arm."

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This photo was taken at Neville G. Penrose & Rowan Drilling Company "Kloh No. 1", Odessa, Texas. Left to right, the men are: (In front) Chick Brummett, tool dresser; Paul Critton, driller. (In rear) Mike O'Neal, driller; C. H. Cloyd, tool dresser; H. R. Cutlip, Union Wire Rope Corp.; D. R. Wilson, Rowan Drilling Co.; Joe Collins, driller.

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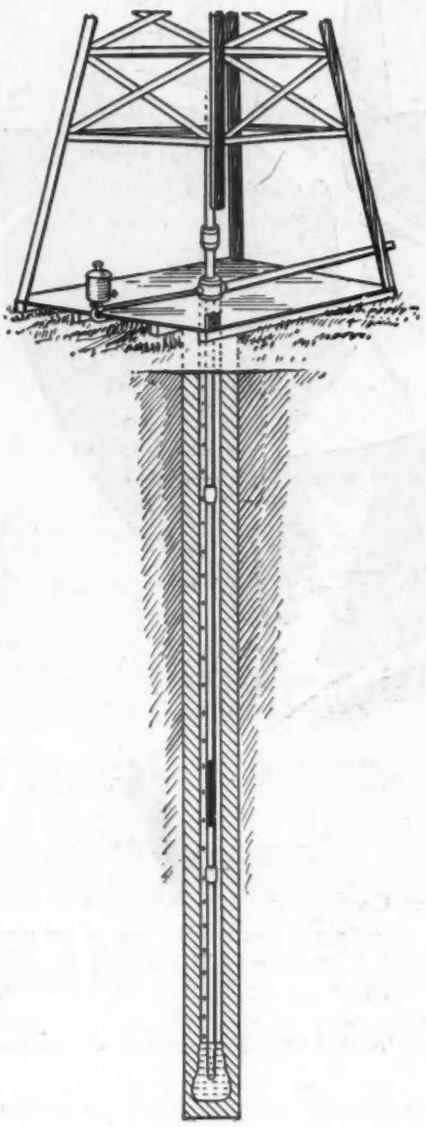

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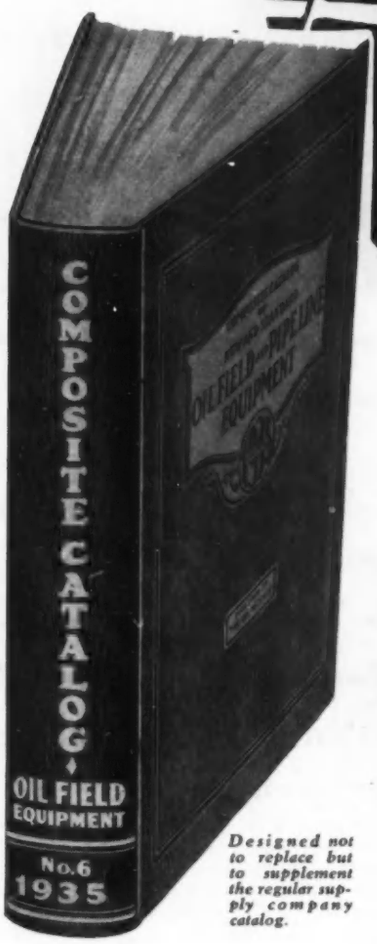

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THE OIL WEEKLY

ENGINEERING • STATISTICS • THE WEEK'S NEWS

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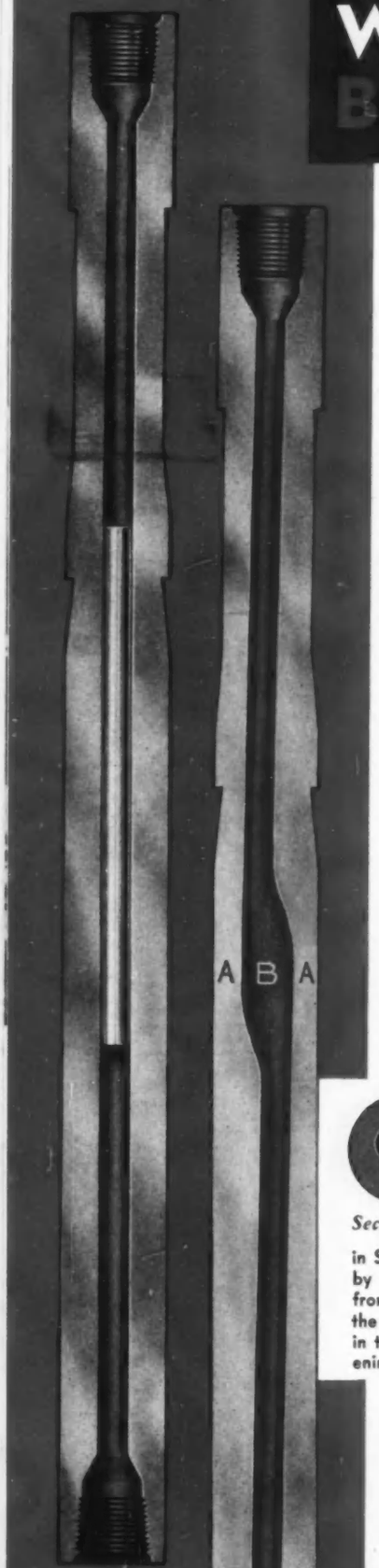

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VOLUME 77, No. 13 JUNE 10, 1935

THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING • NEWS • STATISTICS

The Changing Panorama

DIRECTORS of the American Petroleum Institute the past week adopted resolutions designed to guide the industry in conducting its operations since dissolution of NRA. The first resolution urged continuance of several practices used under the code, Congressional consent to interstate oil compacts, limitation of imports, stricter state enforcement laws and that the Bureau of Mines continue to estimate production necessary to meet demand. The second resolution was one seeking the use of voluntary codes. Page 9.

IMMEDIATE efforts to revive the codes of fair competition will be abandoned, according to President Roosevelt. Efforts will be made, however, to protect some of the gains made under the codes by legislation that shortly will be submitted to Congress. A feature of contemplated legislation will be ratification of the interstate compacts. Page 10.

POSSIBILITIES of reviving the oil and other codes with all provisions permissible under the Supreme Court decision are being studied in Washington, following reports that President Roosevelt has plans for new legislation. (Page 10). Oil Administrator Harold L. Ickes, heartened by the President's statement, let it be known he was having the Thomas bill studied by legal experts and that he hoped, in the event it was considered constitutional, that it could be enacted within a few weeks. Page 11.

IMMEDIATELY afterwards, however, the President let it be known that he was not backing the Thomas Bill. In a session at the White House he stated he saw no need for federal control such as the Thomas Bill if all states joined the interstate compact movement. Page 11.

THE increase in imported foreign-produced crude and its products was branded on the floor of the House of Representatives last week as a menace to the American petroleum industry comparable to that offered by East Texas hot oil prior to the enactment of the Connally oil bill. In March, 1935, a total of 1,900,000 barrels were imported in excess of authorized importations. Page 16.

THE State of Texas recently has been confiscating hot oil and selling it by auction. The result has been prices of about 40 cents per barrel, which is no better and just as demoralizing to markets as when sold by hot oil merchants. Fortunately, the state has recognized the advisability of getting a better price and no further sales are planned for the immediate future. Several East Texas refiners also have attacked the validity of the new confiscation law, which was another factor in deciding to discontinue sales at this time. Page 16.

CALIFORNIA gasoline prices were reduced in the southern part of the state last week. Major companies now are getting 14.5, 15.5 and 17.5 cents per gallon for the three grades they handle. Large independents are receiving a cent less for third-grade products. Unless some method is worked out for purchasing the 500,000 gallons a day formerly bought by the Pacific Coast Petroleum Agency it is feared a drastic price war may develop on the West Coast. Page 41.

ONE of the most interesting trials of cooperative operations will be tried in the South Burbank field, Osage County, Oklahoma. Operators in the field have agreed on

a unit operation plan that includes several unique features. The primary purpose of the plan is conservation of gas energy, thereby increasing ultimate recovery, reducing lifting costs and maintaining a high gravity crude oil. A number of other economic advantages also are expected to result from unitization of operations. Page 49.

CRUDE production in the East Texas field again is approaching the 500,000-barrel mark. Allowable production from 17,469 completions, including 2856 classed as marginal wells, amounted to 461,931 barrels on June 4. Hot oil production is estimated to be from 25,000 to 30,000 barrels per day, making the field's total output nearly 490,000 barrels. This rate of flow is expected to cause additional declines in the field's bottom-hole pressure.

BOTTOM-HOLE pressure in the East Texas field declined four pounds last month, which places it at the lowest level in its history. The East Texas Engineering Association report on 322 key wells showed a weighted average of 1213 pounds on June 1. Page 46.

WITHIN 45 days Lone Star Gas Company will commence construction work on a 114-mile 20-inch welded natural gas line that will connect its North Texas trunk line system with the Cayuga field of Anderson County, Central East Texas. The projected line will have a maximum capacity of 125,000,000 cubic feet. Page 47.

EAST Texas completions averaged 15 per day during the past week, 12 of which failed to register natural flow. Eight of these were equipped for pumping, while four were swabbed to make their production.

MANY points of interest have been gained during repressuring work in Northeast Kansas shoestring fields. These will be of benefit in conducting additional work of this type in both this district and other sectors of the country. Page 25.

THE number of producing fields along the Gulf Coast today are more than 3½ times greater than in 1922. Geophysical prospecting and a number of geographical advantages have been principal factors in increasing the area's reserves to 1,500,000,000 barrels. Page 19.

ONE of the ten wildcats being drilled on the Walton-Keystone structure, Winkler County, which is being touted as the next important West Texas oil strike, showed heavy gas pressure last week from brown lime section at 2504-2515 feet. It is three miles southeast of a wildcat showing 8¼ million cubic feet at 2945 feet. The brown lime formation, a reliable geological marker, has been found higher in this area than in any part of the county, which has one major field and more than half dozen smaller fields.

THE most important Rocky Mountain strike since discovery of Salt Creek is thought to have been made eight miles south of Medicine Bow, Carbon County, Central Wyoming. It is Ohio Oil Company and The California Company's Kyle 1, which on June 7 flowed 6360 barrels of 63 gravity crude and 81,000,000 cubic feet of gas daily.

THE northern portion of the East Texas field has been extended approximately one half mile west by a promising completion in Upshur County. Several recent extensions have been scored in this county. In all, about 4000 acres of producing leases have been added to the field since the first of the year. During the week a minor extension also was made in the south portion of the field.

WHENEVER operators have an excessive amount of generator capacity and ample lines, electric power factor is of little moment since the actual cost of producing the energy lost is nominal. However, if more generator capacity is needed corrective steps should be applied, since it is obvious that the power factor of the load on a generator affects its capacity materially. Page 29.

THE second new Government Wells trend producing area in as many weeks was opened in South Texas last week by a well that initially flowed 600 barrels through a ⅜-inch choke. The new strike is considered to be of great importance due to the excellent recovery obtained from the same horizon in the Government Wells field.

The Oil Man's Calendar

JUNE

19-21 *American Society of Chemical Engineers, Cincinnati, Ohio.*

20-21 *Pennsylvania Grade Crude Oil Association, State College, Pennsylvania.*

24-28 *American Society for Testing Materials, Detroit, Michigan.*

AUGUST

American Petroleum Equipment Suppliers Association.

19-24 *American Chemical Society, San Francisco, California.*

SEPTEMBER

18-20 *National Petroleum Association, Atlantic City, New Jersey.*

25-27 *National Petroleum Association, Atlantic City, New Jersey.*

NOVEMBER

4-5 *Independent Petroleum Association of America, Annual Meeting, Dallas, Texas.*

11-14 *American Petroleum Institute, Annual Meeting, Biltmore Hotel, Los Angeles.*

Resolutions *Designed to Guide Industry are* Adopted by A.P.I.

NEW YORK, JUNE 6.

THE American Petroleum Institute's board of directors meeting here Wednesday adopted two resolutions designed to guide the petroleum industry in conducting its operations in the period following dissolution of the NIRA petroleum code. Forty-five directors, representing all branches of the industry and all sections of the country attended.

The first resolution urged that the industry be not disconcerted by dissolution of the code, and advised that oil companies observe rules of fair practice found by experience to make for stability and to be in the public interest. All companies were asked to maintain present wage and hours of labor schedules and to refrain from employing child labor.

State Compacts

The industry was advised to unite in seeking prompt consent of Congress for the interstate oil compact already approved by legislatures of five principal oil-producing states, and for directing the United States Bureau of Mines to estimate the quantity of crude oil which should be produced to meet current demand for domestic consumption and for exports of petroleum and its products.

Unity of action was advocated for the industry also in seeking authority for the present to limit imports in some proper ratio to domestic productions for such a period as may be necessary, and for making permanent and enforcing the Connally Act, which expires June 16, 1937.

The industry was asked to cooperate with state conservation authorities in adequate enforcement of existing state oil conservation laws, and to unite in opposing further federal legislation providing for regulation of any branch of the industry except as suggested in the resolution.

Pending congressional action, the Bureau of Mines was requested to estimate production necessary to meet demand and to indicate the required amounts for the country as a whole and for each oil producing state.

The second resolution declared that since Federal Trade Commission procedure provides opportunity for continuation of a voluntary marketing code, and since rules of fair trade practice authorized by the commission on June 12, 1931, still are in effect, the earlier marketing code of the industry be revised. Present members of the marketing committee of the Planning and Coordination Committee were appointed a committee to recommend immediate revision. Regional, state, and local code marketing committees of the Planning and Coordination Committee were appointed committees of the institute's division of marketing.

First Resolution

The resolutions follow:

"Be it resolved by the Board of Directors of the American Petroleum Institute: First, the petroleum industry should not be disconcerted by the dissolution of the petroleum code. It is the judgment of this board that the oil companies engaged in the business of producing, transporting, refining and marketing petroleum and its products should observe these rules of fair practice which they have learned from experience are sound and wholesome, make for stability and serve the public interests. This done, there is no ground for apprehension. This board unanimously urges all those engaged in the industry to refrain from the employment of child labor, and to maintain present wages and hours of labor. It is the opinion of the board that continued observance of the principles and procedure stated, and the adoption of the program hereinafter set forth will afford the necessary cooperation between the industry and the federal and state governments, insure the conservation of the nation's petroleum reserves and provide the public with a plentiful supply of gasoline and oil of good quality at reasonable prices, and at the same time enable the industry to contribute its rightful share to the speedy recovery by the nation from the prolonged depression.

"Second: The board of directors advises the industry to unite in urging prompt action by the Congress:

"(a) Consenting to the interstate oil compact already approved by the legislatures of five of the principal oil producing states, and directing the United States Bureau of Mines in aid of the oil producing states to estimate currently the quantity of crude oil necessary for the country as a whole and for each state to produce to meet the current demand for domestic consumption and exports of petroleum and its products and to make its forecasts available to the interstate compact commission and the respective conservation authorities of the oil producing states and to the petroleum industry;

"(b) Authorizing the President to limit imports in some proper ratio to domestic production for such a period of time as may be necessary.

"Third: That the existing Connally Act (which expires June 16, 1937) should be made permanent and that those engaged in the industry should cooperate in every appropriate way with the federal agency in a rigid enforcement of said act.

"Fourth: That those engaged in the industry should cooperate in every appropriate way with the state conservation authorities in the adequate enforcement of existing state laws for conservation of petroleum.

"Fifth: That the petroleum industry should unite in opposing any further federal legislation providing for regulation of any branch of the industry except as above specifically stated.

"Sixth: The United States Bureau of Mines is hereby requested to estimate currently the quantity of crude oil necessary for the country as a whole and for each state to produce to meet the current demand for domestic consumption and exports of petroleum and its products and make its forecasts available to the respective conservation authorities of the oil producing states and to the petroleum industry."

Second Resolution

The second resolution follows:

"The Federal Trade Commission procedure provides opportunity for the continuation of a voluntary code with respect to marketing operations. The rules of fair trade practice authorized by the commission on June 12, 1931, known as the Federal Trade Commission Code, are still in effect. It is, therefore, resolved: That the present members of the marketing committee of the Planning and Coordination Committee be appointed a committee to recommend revision of the earlier code immediately to bring it into agreement with those marketing practices which are recognized by the industry as fair and equitable so far as this may be lawfully done and with the approval of the Federal Trade Commission, and that in the meanwhile the regional, state and local code marketing committees of the Planning and Coordination Committee be and they are hereby appointed also committees of the Division of Marketing of the American Petroleum Institute.

"Be it further resolved, that the committee so appointed report its recommendations to the Board of Directors of the American Petroleum Institute after conference with the Federal Trade Commission."

Government *Officials Hope To Enact* New Legislation

Washington, D. C.—Abandonment of all plans immediately to revive the codes of fair competition has been decided upon by the administration, it was announced June 4 by President Roosevelt.

Efforts will be made, however, to protect some of the gains made under the codes by legislation which will shortly be submitted to Congress.

A feature of this legislation, the President made known, will be a measure ratifying the voluntary compacts agreed to by six of the producing states and providing for federal control of interstate shipments of oil and its products in the event any of the compact provisions are violated.

In a further effort to protect to some extent the gains of labor under the codes, a measure will be sought authorizing as a requirement in every government contract that all persons engaged in the production of the supplies or in the carrying out of the contract shall be paid in accordance with minimum wage and maximum hour standards. This requirement will apply not only to contracts awarded by the regular establishments of the government but also to those made by states, municipalities or other local governmental agencies with the use of loans or grants secured from the federal government.

While the President said that probably not much over one percent of the industrial production of the country is used in government work, NRA officials expressed the belief that the effect of this requirement would be much wider than thus indicated, since competition for these contracts is very keen, and the number of firms bidding is many times that of those which secure orders.

New Measures

While no further recovery legislation is to be sought at this session of Congress, the President indicated that new measures may be prepared during the next six months for submission at the next session, and that he would seek the continuance until April 1, next, of a skeletonized NRA for the gathering of statistical data as to the effects of the codes, to serve as a basis for any new legislation which may be devised to carry on the industrial recovery program halted by the Supreme Court decision May 27.

The ligislation planned for the immediate future, it was admitted in an official White House statement, "does not make much progress toward obtaining the ultimate objectives of national standards for the working population of America nor for national standards which seek to protect honorable employers against the unfair practices of less honorable competitors."

There will be no further effort to enforce any of the provisions of the code, it was stated. It should not be assumed by any person that this proposed continuation of the National Recovery Administration, in skeletonized form, relates in any way to the enforcement of working conditions or fair trade practices formerly existing under the codes," the statement said. "All such requirements were eliminated by the Supreme Court decision."

The oil legislation which the President will seek is now contained in the Thomas oil-control bill pending in the Senate, but it was indicated at the White House that the other provisions of that measure, vesting in the Secretary of the Interior broad powers of control over the oil industry, would not be included.

Possibilities of Code Revival Being Studied

Washington, D. C.—Possibilities of a revival of the oil and other codes were under discussion in Washington over the week-end following the loosening of reports that President Roosevelt had under consideration new legislation which would return to effectiveness all those provisions of the original industrial recovery act which clearly are permissible under the Supreme Court decision in the Schechter case.

The plans under consideration, which are merely in the formative stage and far from perfected, it was said, contemplate a re-writing of the provisions delegating to the President the power to impose codes, which were held invalid by the court, so as to set up, perhaps through resort to the taxing powers of the government, definite machinery whereby codes could be imposed upon businesses engaged in interstate commerce, while making possible the adoption of voluntary agreements by concerns confining themselves to intrastate operations, which the court said could not be reached by the Federal Government.

Coupled with the provision for the establishment of interstate codes, it is understood, might be a change in the Federal Trade Commission machinery whereby cease-and-desist orders could speedily be issued in prima facie cases of violation.

In the event the Administration fails to adopt a comprehensive plan for industrial control, Senator Nye of North Dakota is expected to push a bill introduced by him June 5, authorizing the trade commission to cooperate with industry in the drafting of agreements for the abandonment or prevention of unfair methods of competition and the establishment of ethical business practices, such agreements to be exempted from the operation of the anti-trust laws. Cease-and-desist orders would be issued in the event any member of an industry violated such an agreement.

State Compacts

In discussing this phase of his new legislative program, the President explained that six of the oil states have entered into compacts which, in effect, are treaties between the states, filed with the Secretary of State in Washington. When ratified by Congress, these compacts will give to the states under their treaty-making powers the right to agree among themselves on the limitation of oil production.

In the event of the violation of the compacts, the new Petroleum Administrative Board which is to be created by the bill would have the power to step in and enforce compliance.

The President indicated that elimination of the strict federal-control provisions of the Thomas bill was due largely to the fact that the compact states want no further legislation, at least until their plan has been given a trial.

The chief objection to the plan, he said, is not that it is not good but that it does not cover a great many other states also producing oil, among them New York, Pennsylvania, West Virginia, Kentucky and Michigan, where, while their production is relatively small and from stripper wells, it would affect the industry.

However, the President added, there are a good many members of Congress who think there should be legislation to enable the federal government to step in and act in case any state failed to live up to the compact.

Among the agencies killed by the Supreme Court decision are the seven labor boards created under NRA, included in which was the Petroleum Labor Relations Board.

Ickes Hopes to Get Thomas Bill Passed

Washington, D. C.—Heartened by President Roosevelt's statement June 4 that he would ask Congress to pass a measure ratifying the interstate compacts and giving the Federal Government authority to enforce them, Secretary of the Interior Harold L. Ickes on June 6 made known that the Thomas bill was being studied by the legal experts of the department to determine whether it meets the limitations set forth by the Supreme Court in its decision in the Schechter case.

In the event the bill is considered constitutional, Ickes indicated, he will urge its enactment in the amended form in which it was reported to the Senate several weeks ago.

The Thomas bill provides for the ratification of the compacts and their enforcement by the government, but goes much further and gives the government a broad control of the oil industry.

Diverging from his discussion of oil legislation, Secretary Ickes assailed the American Petroleum Institute as representative of the big interests in the oil industry and not the industry as a whole, and also voiced his belief that the Petroleum Administrative Board still has authority to set up the statistical basis of allocation of production even though there is no way to enforce the observance, but did not make it clear that he would seek to have the board continued as a statistical body.

"In principle," the Secretary said, "I am for the Thomas oil bill. I don't know what changes will be necessary in the light of the Supreme Court decision."

The secretary displayed little enthusiasm over the suggestion of the American Petroleum Institute for voluntary codes, pointing out that "the industry has tried voluntary codes before and they were a failure. Human nature," he continued, "probably now isn't much different than it was then. We need federal legislation.

"I doubt whether the institute represents the industry," he commented. "I have always understood that it represents the big interests."

The threat of having oil declared a public utility remains over the head of the industry, Secretary Ickes asserting that if the industry cannot be managed in any other way it should be declared a public utility.

During the week, as study of the Supreme Court decision disclosed its broad application, the Pacific Coast Petroleum Agency and Refiners Agreements were canceled by the secretary and all code activities were abandoned.

The federal tender board, which was set up under the Connally bill, however, will be continued and funds will be sought from Congress for its operation after June 30. Legal experts who have studied the Connally bill hold it is immune from the Schechter case decision, the delegation of power in the measure being specific.

President Favors Interstate Compacts

Washington, D. C., June 7.—President Roosevelt today was represented as feeling that no federal control of the oil industry will be required if all the producing states become parties to the interstate compact.

At the White House it was made known that the President expected no federal control action this session, although believing that the present moment leaves a need for federal action to protect the states which are not parties to the compact.

In making known his sentiments on the question of oil control, the President was seen as suggesting that all the oil states join in the compact as a means of eliminating agitation for the Thomas bill. Unless all the states participate in the voluntary movement, it was indicated, the pressure behind the measure may be sufficient to secure its enactment.

Commerce Control Bill Designed to Replace NRA

Washington, D. C.—Creation of a Federal Commerce Control Commission, to salvage and take over such of the NRA as remains valid under the Supreme Court ruling of May 27, is provided for in a bill introduced in the House of Representatives June 4 by Congressman Shanley of Connecticut.

The measure would declare interstate commerce to be a public utility and would impose an excise tax of $1 on every enterprise engaged in interstate commerce. All enterprises using the mails or any form of interstate transportation or communication would be required to register and secure a license from the commission, the members of which would be appointed by the President.

The commission would have the authority to impose regulations for the conduct of businesses subject to its control but no effort would be made to control or regulate enterprises engaged solely in intra-state commerce.

Importations Are Charged With Being Serious Menace

Washington, D. C.—Charges that imports of oil from abroad now constitute a menace to the American petroleum industry comparable to that which was offered by Texas "hot" oil prior to enactment of the Connally oil bill were laid before the House of Representatives June 3 by Congressman Thomas L. Blanton of Texas (Abilene).

Details of the import situation were furnished by A. M. Howsley of Albany, Texas, in a statement which Blanton read to the House, in which it was indicated that much of the opposition to federal-control legislation came from importers who foresaw that under such a law their receipts of foreign oil would be markedly curtailed.

"If the state of Texas were dumping 1,900,000 barrels of hot oil on the market in a single month, the whole domestic petroleum industry, with the exception of the hot oilers themselves, would be clamoring for Congress to do something, to do anything to stop this dumping," Mr. Howsley asserted in his statement. "A much smaller overproduction caused us to pass the Connally hot oil act, which was proposed by a Texan, supported by Texans, and is proving invaluable to Texas.

"Today the importers of cheap foreign petroleum are the 'hot-oil' menace of the industry and of the whole national recovery program. They brought into the country in the single month of March 1,900,000 barrels of petroleum products in excess of the authorized importations under the limitation placed by executive order of the Oil Administrator. Ever since the March, 1933, conference of the oil industry in Washington, held under the auspices of the Secretary of the Interior, it has been agreed that the importations of crude petroleum and its products into this country should be at an average rate of 108,000 barrels per day, this being the approximate average of daily imports during the last six months of 1932. After the adoption of the code the same liimtation was continued. During the month of March, according to figures made available by the United States Tariff Commis-

(*Continued on page 54*)

Tomorrow's Oil Control

Sentiment in the industry is optimistic, despite uncertainties following N. R. A. collapse.

JACK LOGAN
Associate Editor

DESPITE the demise of the Blue Eagle, the petroleum industry decidedly is not out of politics. Developments in Washington last week indicated there will be determined efforts to set up new federal regulation to replace the invalidated NRA oil code control.

Meanwhile, developments in Texas turned the spotlight on state oil control and related politics in that state, some important evidence having been assembled by a legislative committee investigating reports of East Texas hot oil operations.

Markets Reflect Hopefulness

IN the face of the political developments, however, the industry's outlook continues to be considered predominantly favorable. Such a hopeful attitude has been exhibited, at any rate, by those trading in oils and in the securities of oil companies.

The markets for crude oil and petroleum products, except in California, have continued firm. In fact, Mid-Continent tank car prices on gasoline of higher octane grades were slightly better last week than in the previous week, while low octane gasoline prices were unchanged.

In the trading in the financial capitals, oil company stocks have performed relatively well since the recent historic NRA decision. For some months there has been a perceptible increase of popularity of oil company stocks as a group. This attitude is in contrast with that which prevailed for the past several years, under which traders were wary of the industry, due to repeated setbacks. The new interest likely reflects the fact that the industry is in the best statistical position for years. The traders apparently do not choose to be turned aside, under such circumstance, by the political uncertainties that have suddenly sprung up.

Future of Federal Control

WHILE some industries still leisurely weigh their losses and gains by the NRA decision, the oil industry had but a few days for such respite. Within a week of the voiding of NRA oil control, there was serious contemplation of its replacement by new federal control. The agitation for the new regulation gathered momentum rapidly, despite the fact that many within the industry welcomed the NRA downfall, and will fight against similar federal restraints in the future.

In accordance with predictions in this column last week, the Thomas bill for federal regulation, bitterly fought by many within the industry, has gained much strength in consequence of the NRA downfall. There was, at first, some speculation that the Supreme Court's opinion on NRA foredoomed constitutionality of the Thomas bill, and consequently would reduce more than ever the bill's chances for passage. But instead, there has been a rallying around the measure by federal control advocates, and a shouting that NRA's fall makes its passage imperative.

Thomas Bill Endorsed

PRESIDENT ROOSEVELT listed the Petroleum Administrative Board as one of four agencies that should be saved from the NRA ruins through new federal legislation. He indicated that saving of the board or its equivalent is necessary if there is to be continued control of the nation's petroleum production. For saving such board, he said, the only means available is that offered by pending legislation, obviously referring to the Thomas bill, which provides for a "federal petroleum board."

It has been contended by many that such a board and such federal control are not needed; that instead, there is need only for congressional approval of the interstate oil control compact. The President consequently offered justification for his recommendations, by asserting the interstate compact does not seem to go far enough to be fully effective. While a half dozen states have ratified the compact, he said, over twice as many

HOU
CO-A
AL

● Although the drawing shows the spiral installed on casing in continuous form, it is merely for the purpose of bringing home the idea of the spiral. Actually, the spiral comes in ten-foot sections which can be installed on the casing at critical points for the purpose of assuring that the casing is not in with the formation at those points, and to give the cement a twist around the casing at those points.

● Co-Axial Spiral consists of a flat metal base on which is vulcanized a triangular rubber moulding which is rigid out to the O. D. of the coupling but flexible beyond. This allows it to yield and ride over formations without cutting when being run in a well. To install the spiral, it is simply slipped over the end of the casing and the metal are welded to the casing at intervals.

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have not. He leaned, consequently, toward the view that the federal board is needed as a back-stop for the interstate compact set-up, to keep non-signing states in line, and to function if some or all the signing states should fall down on their agreements.

UNDER the Thomas bill, the interstate compact would be approved by Congress, and states would have the opportunity to control their production themselves; but failing to do so, they would be obliged to accept similar control by the federal government. It would be the responsibility of the "federal petroleum board" to regulate oil imports; to determine how much oil each state should produce in order to balance supply with demand; and to insure such balancing, if not by the states and their compacts, then by the "Board," which would limit the interstate movement of oil from fields or wells.

Constitutionality Debated

IN disagreement with contentions the NRA decision precludes constitutionality of the Thomas bill, advocates of the measure maintain it would stand court tests on the basis of conserving a natural resource and promoting national defense. It is further contended the bill would be exempt from the Supreme Court's NRA objections because oil traffic is of the "stream" or "flow" type of commerce, and therefore subject to federal control when involved in interstate movement.

Opposition to the Measure

STATE oil control authorities jealously oppose the bill as violating states' rights and invading their realm. Many within the industry, disgusted with NRA code control, object to the Thomas bill chiefly on these contentions: (1) it is undesirable, in general, or in principle, because it would tend to strengthen and perpetuate government domination of the industry; and (2) the bill is dangerous, specifically, because it would hasten and harden government domination through the provisions regarding the federal petroleum board. It is contemplated the board would be controlled by the Secretary of the Interior, with the industry having small voice in policies pursued.

Status of the Bill

ALTHOUGH the Presidential endorsement greatly enhances the possibilities of the Thomas bill's adoption, the measure would have to go a long road yet to become law, and it remains highly doubtful if it could make the grade. The bill has already been reported favorably in committee in the Senate, but has not been voted on upon the floor. In the House, it has not yet reached first base, being still in committee.

Aftermath of NRA Decision

ASIDE from the agitation for the Thomas bill, there have been various developments of importance to the oil industry in the wake of the Supreme Court decision on NRA. The petroleum industry, along with others, found interest, but of course little significance, in the President's request that Congress extend NRA to April 1, 1936, minus codes or control of working conditions; the chief responsibility of the new NRA organization to be study of results of lapse of the codes.

Fate of Federal Oil Agencies

THE court decision was the death knell of 16 agencies, including three that affected the petroleum industry. The administration's plans contemplate that the seven labor boards will die, including that for the petroleum industry; that four agencies may be saved by new legislation, including the petroleum administrative board; that two boards may be retained by amendments to executive orders, including the national resources board; and that the remaining three agencies will pass out of the picture, having finished their work.

WITHIN a week after the decision, the President had approved the dismissal of 411 cases brought by and against the government under the NRA and its affiliated agencies. Of that total of 411 cases, 86 (or over one-fifth) were petroleum code cases.

P. & C. Committee Surveys, Adjourns

A WEEK following the decision, the oil code planning and coordination committee, representing the industry, met in executive session, recommended temporary, voluntary adherence to code provisions on "fair practices" and working conditions, and adjourned until June 14, for further clearing of the atmosphere.

Hot Oil Investigation

WHILE the national capital lately has been the principal scene of political developments involving oil, Texas also now is furnishing some important developments, in the form of an East Texas hot oil investigation by a committee of the state government's lower house.

Operating behind closed doors, like a grand jury, the committee has indicated it is finding much highly significant evidence. Revelation of the findings in the committee's report will possibly have far-reaching political effects, it is intimated. Allegations of flagrant violations of regulations are being confirmed, the committee has revealed, while the group has heard testimony strongly indicating "the sale of influence, rather than service, in several phases of oil regulation," especially in connection with obtaining permits to drill wells under exceptions to regulate spacing rules.

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Eastern District Holds Interesting API Meeting

Pittsburgh, Pa., June 6.—What Carl Young, secretary of the Production Division of the American Petroleum Institute, designated as the outstanding district meeting of the organization closed here this afternoon. He referred to the attendance and the type of program at the annual meeting of the Eastern District of the Production Division of the Institute.

H. H. Phillips, T. W. Phillips Oil & Gas Company, Bradford, was elected chairman. Vice chairmen elected were as follows: J. C. Askam, Ohio Oil Company, Findlay; C. A. Bonine, School of Mineral Industries, State College, Pa.; F. E. Eckert, Hanley & Bird, Bradford; and George Wittmer, Wittmer Oil & Gas Company, Pittsburgh. Fred Benkert, Peoples Natural Gas Company, Pittsburg, was selected as secretary-treasurer.

The opening session, June 5, was devoted to a discussion of the future oil reserves of the Eastern oil fields. P. H. Curry, president, South Penn Oil Company, estimated the reserves as good for 39 years. Difficulties were classed as those resulting from cheap production methods in other areas when the Eastern fields have been depleted to a point of low output and consequent high cost production. He recommended cutting all possible production costs as the proper outlook for the producer in this area.

B. W. Meals, president, Carnegie Natural Gas Company, said the recent decision of the Supreme Court on NRA should prove a boon to the industry in his remarks on opening this session.

The afternoon session consisted of a symposium on recovery of oil and gas by artificial means and was introduced by H. R. Pierce, consulting engineer, Pittsburgh. He gave details of unit operation of a field of settled production at Sistersville, West Virginia, as an example of what can be accomplished by introducing artificial recovery to a field on a wide scale. The study of sand sizes and other underground conditions as an influence on production was given by laboratory examples and calculations therefrom.

Latest pumping methods and equipment required was presented by J. C. Askam, Ohio Oil Company.

Experience with acid in gaining production from limestone formations was given by R. B. Newcombe, Michigan State geologist. Records from acid applications in Michigan, as well as methods made up the first part of his paper. He also gave a resume of the development of the Michigan oil fields.

That geophysics will play a growing role in detecting sub surface structures in Eastern fields was the general conclusion from a discussion of that subject. It was introduced by Frank M. Brewster, general manager, Belmont Quadrangle Drilling Company. He traced the introduction of the seismograph in the search for deeper gas bearing sands in New York and Pennsylvania. After some disappointments in the first reflection shooting, his company was able to get more satisfactory results from later effort and by using geological study in connection.

It was brought out that the seismograph could be instrumental in searching for structures below the Bradford sand. This is as deep as 4000 feet in some places. Dr. J. French Robinson, Peoples Natural Gas Company, and James D. Sisler, Carnegie Natural Gas Company, discussed this subject.

Each predicted increasing use of reflection shooting in the Eastern area with increasing favorable results as geophysicists learn more of the area and geologists learn more of the function of geophysical work.

C. P. Parsons, Halliburton Oil Well Cementing Company, Duncan, Oklahoma, gave information on how cement can be used for reworking the older wells of the area, assist in repressuring and flooding and also reduce the cost of abandoning wells. Practices now used in the Mid-Continent were given in detail and discussed as they may be applied to the Eastern fields.

Texas Confiscation Sales Delayed Pending Law Test

Austin, Texas.—Attorney General William McCraw has announced that there will be no further sales of confiscated oil pending the completion of a check of East Texas storage which is now being made by the Texas Railroad Commission.

Four sales have been made by the state, as the result of agreed judgments, and in most instances the oil brought 40 cents per barrel. Approximately half a million barrels was sold.

An announced sale of 1,000,000 barrels of confiscated oil was cancelled Tuesday.

In statements issued last week Ernest O. Thompson, chairman of the Texas Railroad Commission, questioned the advisability of selling oil at 40 cents.

Subsequently McCraw answered this statement, pointing out that most of the profit was taken out of the transaction, and that the state had realized approximately $140,000 from these sales. However, only $8,540.80 has actually been paid, according to information available in Austin.

The oil sold so far, it is reported, was in storage before the confiscation law became effective. Attorneys question the constitutionality of a retroactive statute, and a test case has been filed in Tyler to determine the validity of this phase of the law.

Sales made so far have been to operators who had possession of the oil. None have been announced in advance, each sale being made through a receiver appointed through an order of the court after the case has been tried and the oil declared "unlawful."

Texas "Confiscation" Law Attacked in Federal Court

Austin, Texas.—Seven East Texas refiners have attacked the tender orders of the Texas Railroad Commission and the validity of the new confiscation law in a suit filed at Austin last week.

Hearing of the case before a three-judge federal court was announced for Saturday, June 11, by Federal District Judge R. J. McMillan. Judges N. P. Bryan and T. M. Kennerly have been called to sit with Judge McMillan.

The plaintiffs contend that operation of the Texas Railroad Commission processed oil tender orders have injured their business, and that these orders are invalid since they do not contain "findings of fact" as provided in the statutes.

House Bill 581, the oil confiscation law, is allegedly invalid because officers are permitted to make arrests without warrants.

In the case styled Gus Pierce et al vs. Railroad Commission et al, the following were named plaintiffs: W. A. Fagan, W. A. Fagan Refining Company; E. Holmes, Acme Refining Company; Basil Jay; S. G. Gentry, Riverside Refining Company; W. H. McKean, McKean Fuel Oil Company; M. S. Johnston and George Casey, Jumbo Refining Company.

The attorney general was named defendant with the railroad commission.

F. O. McKinney, H. P. Shead and M. Neal Smith are attorneys for the plaintiffs.

MEN IN THE INDUSTRY'S NEWS

O. G. CARROLL, driller for the past several years for Pure Oil Company in the Seminole district, has been made production superintendent of the Edmond subarea of the Cushing district. Pure Oil Company as yet has no production in the Edmond pool but has a well drilling in the northern portion of the area.

JOHN H. LANGSTON, chief scout for Sun Oil Company, Dallas, departed last week accompanied by members of his family via automobile on a vacation visit to Washington and other points near the Atlantic Seaboard.

RAY DENNETT, president, Maraydun Oil Company, formerly in Oklahoma City, has moved to San Antonio and is establishing general offices for the company in the Alamo National Building. Harry A. May, Rochester, New York, is vice president. The company is interested in the drilling of three deep tests in Live Oak County.

J. S. BLACKMAN, in charge of the Tulsa office of the Oklahoma Corporation Commission's Oil and Gas Conservation Department, and Mrs. Blackman, left Tulsa June 1 for a motor trip through the east.

MOSE HARRIS and JIM B. CHEW of Harris Drilling Company, Dallas, have moved to San Antonio, and have opened offices in the Majestic building. They are moving one rig into the coastal area and are preparing to move two more rigs into the South Texas district for contract work. The concern will close its main office in Dallas and its branch office in Houston, centering its operations around San Antonio.

JAMES WOOD, official of Wood-Callahan Oil Company of Los Angeles, is in Kansas City on business.

PAUL WEAVER, head of geophysics for Gulf Production Company, was the speaker at the Houston Geological Society's regular weekly meeting June 6. He discussed seismograph refraction shooting of the new style.

LeROY H. HINES, assistant legal adviser in the United States Department of the Interior, Washington, D. C., has resigned to accept a position with Standard Oil Company of California, at San Francisco, California, effective June 15.

C. R. MINOR, vice-president of Gulf Refining Company of Louisiana, Shreveport, attended the commencement exercises at Sewanee Military Academy, Sewanee, Tennessee, last week to witness the graduation of his son, Edwin C. Minor, who was one of the outstanding members of his class.

JOHN C. NICKLOS, who resigned several months ago as Gulf Coast district drilling and production superintendent for Continental Oil Company after 10½ years service, has been identified with the oil industry for the past 29 years, during which time he was an operating figure in several oil producing countries. Mr. Nicklos resigned to become vice president of Nicklos Drilling Company, a drilling contractor concern, and vice president of E. J. Nicklos, a producing company. His brother, E. J. Nicklos, is president of both companies. John Nicklos was born in Petrolia, Ontario, Canada, and at an early age went to Galacia, Austria, where his father built

JOHN C. NICKLOS

the first large refinery for W. H. MacGarvey, pioneer of the Galacian oil fields. At the age of 24, young Nicklos became superintendent for Oran Oil Syndicate in North Africa, where he was located for 1½ years. He spent three years in Peru, where he drilled that country's deepest well in 1931 to 4850 feet. He worked in Mexican fields eight years. In 1929 he drilled New Mexico's deepest well to 6773 feet.

D. E. McMAHON, formerly with Hudson's Bay Oil & Gas Company, Calgary, Alberta, Canada, recently moved to Houston to become office manager for E. J. Nicklos, independent operator.

GUY RADCLIFFE, who has been associated with Simms Oil Company in South Texas for the past several years, has joined Luling Oil & Gas Company, of San Antonio, to serve in the scouting department.

WALTER HILTON and Meise, of Los Angeles, California, have moved to San Antonio and opened offices in the Majestic building. They have formed Mart Oil Company, composed of a number of Californians and have made a location for a deep test on Matagorda Island.

D. D. DUNLAP, independent operator in California, departed late in May for Honolulu for a month's vacation.

W. G. ROGERS, Rogers Oil & Gas Company and Rogers Drilling Company, Oklahoma City, Oklahoma, has moved to San Antonio, and has opened offices in the Milam Building. The company recently entered South Texas and has several producing wells in the Samfordyce field.

JOHN D. (Jack) EYLERS, 50, Shreveport independent oil operator, died June 2 after a heart attack suffered the day before. Interment was in Shreveport. Eylers was a native of New York State. His widow and two daughters survive.

HARRY PENNINGTON, engineer, producer and oil field equipment manufacturer of San Antonio, was the principal speaker at the regular monthly meeting of the Southwest Texas Oil Scouts Association at San Antonio Petroleum Club, June 7. He discussed "The Trend of Rotary Drilling," including a discussion of various types of rotary equipment, cost of equipment and new inventions.

DILWORTH HAGER, geologist and operator, will close his San Antonio offices June 15 and move to Dallas, to be near his operations in the Red River district.

A. A. BUSCHOW, president of Bridgeport Machine Company of Wichita, Kansas, and his son, A. A. Buschow, Jr., are on a three weeks tour of California oil fields.

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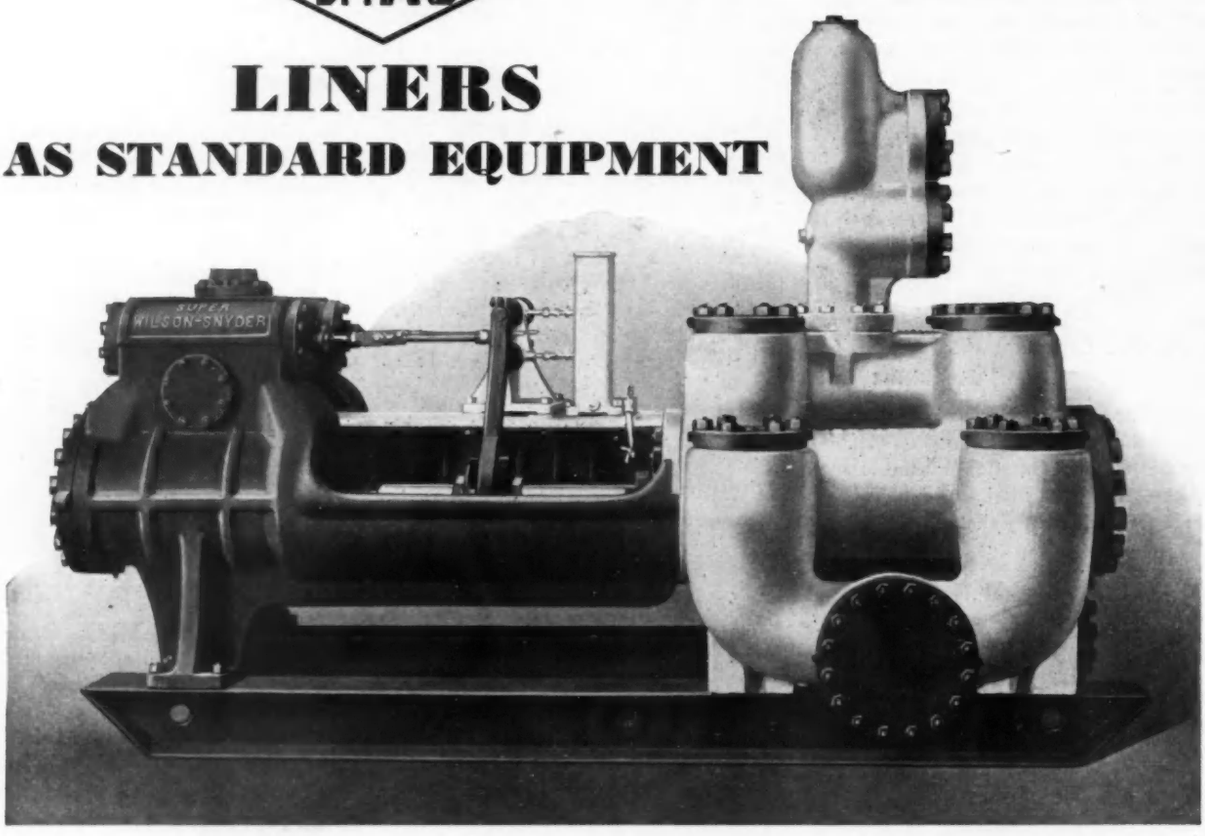

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Gulf Coast *in Last 13 Years Has Trebled Number* Producing Fields

BRAD MILLS
Associate Editor

THE Texas-Louisiana Gulf Coast has not reached its present position as an oil and gas producer by accident. The combination of efforts responsible for raising the district to a key position has been varied and complicated, with research as the principal background. It is true that the combination could not be applied to more remote areas having limited natural resources, but a less aggressive attitude during the past 15 years would have placed this comparatively narrow coastal strip in a much less strategic place than it now occupies.

The fact that the full length of the Gulf Coast strip was favored with numerous oil accumulations has given the district a necessary and natural advantage, but development has been more difficult and the search more painstaking than in districts abounding in surface contrasts. As the average producing depth increased, the task of maintaining or increasing known reserves became greater. Locating, classifying, eliminating and proving structures in a flat and geologically monotonous strip has given the Gulf Coast a technique not found elsewhere.

The Gulf Coast has attained its present standing because of a number of basic factors. Successful application of geophysics, location of large refineries, a vast network of pipe lines, numerous ocean outlets, advancement in deep drilling practices, influence of Conroe trend development, a mild climate, and a steady demand for the type of sweet crude produced, have influenced the increasing search for salt domes along a strip 100 miles wide and about 400 miles long.

Few districts having extensive known and recognized unknown reserves have the natural advantages possessed by the Texas-Louisiana Gulf Coast. These advantages gradually have attracted a number of major producing and integrated companies to the district. Development of production adjacent to natural outlets gives the average producer several advantages over the producer with reserves in an isolated district. This natural advantage has given the Gulf Coast more than its share of activity, and has lifted the district from obscurity to prominence in a comparatively short time.

At the beginning of 1920, the Gulf Coast had less than 30 active producing oil fields, exclusive of the lower coastal fields that usually are classed in the South Texas group. At the beginning of 1935, the number had increased to 94. Prospects are more difficult to classify and number, but the number increased sharply during the 15-year period, totaling about 175 on the first of this year. Opinions differ somewhat as to the number of genuine prospects along the coast, but the known salt domes, salt dome type prospects, and prospects other than the salt dome type have increased in line with proved fields during the past 15 years.

As refineries, pipe lines, ocean loading facilities, and drilling organizations came into full operation, the demand for oil increased. Interest and enthusiasm increased accordingly, but during several periods discoveries and reserves failed to keep pace with actual demands. The search for salt domes was fascinating, but drilling was confined to areas and prospects showing definite surface contrasts, or to those having gas and oil seeps. The cost and risk of drilling promiscuously in such a great flat country were hardly warranted. The predicament was no fault of geology. Discoveries in flat districts that had been based on the presence of gas seeps proved that oil accumulations around salt domes should be expected in level areas and in swampy sections, as well as in the areas showing definite surface "highs."

Geophysics a Factor

Geophysics came to the rescue in 1922 to fill the gap caused by limited surface indications. The torsion balance was introduced in 1922 by Rycade Oil Corporation and Roxana Oil Corporation (now Amerada Petroleum Corporation and Shell Petroleum Corporation, respectively), but it was not put to practical use until 1923, when Rycade Oil Corporation used it to check Nash dome, which previously was rated a good prospect by virtue of topographic indications. The first actual discovery credited to the torsion balance was Long Point dome, Fort Bend County, which was found for North American Exploration Company and Gulf Production Company in 1924. This discovery stimulated interest in use of the torsion balance.

Marland Oil Company (now Continental Oil Company) brought the first seismograph crew to the Gulf Coast in 1924. Orchard dome, Fort Bend County, found late in 1924, was the first actual discovery credited to the seismograph. Although Long Point and Orchard were the only domes found by geophysical methods during 1924, interest in this type of

exploration increased until every major operator was involved in one way or another.

When geophysical methods were introduced along the Gulf Coast, the district had only 41 known salt domes, of which only 26 had produced oil in commercial quantities. During the first five years of geophysical prospecting, more than 60 salt domes were found. Of this total 36 were in Louisiana and 25 in Texas.

The large number of salt domes found in a short time along the Louisiana Gulf Coast proved the value of a method that could locate domal structures in a flat and swampy area. More salt domes were found during the first four years of geophysical prospecting than had been found during the 25 years preceding introduction of the method. Between 1901 and 1913 less than 40 domes were discovered. Between 1913 and 1917 there was not a single salt dome discovery. A very few domes were discovered between 1917 and the introduction of geophysical methods in 1922.

The number of producing fields along the Gulf Coast on March 1, 1935, was crowding 100, more than 3½ times the number existing in 1922. Known and indicated salt domes and prospects not proved as oil or gas producers totaled about 175 on January 1, 1935. Along the fringes of the coastal belt, a number of prospects are not rated as the salt dome type, but they may prove to be deep seated salt domes.

Since the bulk of early Gulf Coast production was from very shallow salt domes, early geophysical work was conducted on the theory that the greatest possibilities lay in shallow exploration. It was obviously easier to find shallow domes than deeper ones, and there was every evidence that many of the former existed.

The net result of the rapid campaign to locate and map shallow salt domes was the discovery of a large number of a type and depth comparable to the earlier producers discovered by surface geology and gas seeps. The discovery in 1928 of Sugarland, Fort Bend County, led to a rapid revision of geophysical ideas. This field had been vaguely indicated during the shallower surveys, but its depth had caused it to be condemned or ignored. Concentration of efforts to spot shallow salt domes had resulted in failure to find definite indication of deeper salt domes.

The brief history of geophysics along the Gulf Coast has been di-

vided into three chapters. The first five-year period was devoted to a search for very shallow salt domes and prospects. The second period recognized the existence of a deeper salt dome, and geophysical methods were changed accordingly. During the second period, little consideration was given to the possibility of deep-seated salt domes below 6000 feet. The third or current geophysical exploration period has been forced to consider possible oil accumulations at 8000, 9000 and 10,000 feet.

Recent discoveries in South Louisiana at 8000 and 9000 feet have given a new significance to geophysical work. It means the reworking of a vast area that has been a prolific producer from shallow and intermediate depth salt domes. The Bosco and Roanoke fields of Louisiana and the Dickinson field, Galveston County, Texas, demonstrate the extremely deep-seated salt dome possibilities of the Gulf Coast. It has been necessary to revise methods and ideas in the search for this deeper production.

It is not too much to say that geophysics has been the greatest single factor in raising the Gulf Coast from obscurity to prominence during a very short period. Production since 1922 in both the Louisiana and Texas coastal belts has been much greater than during any period of similar length, while known reserves have climbed even more rapidly. The proved reserves in the Gulf Coast fields of Louisiana total about 400,000,000 barrels, while the Texas Gulf Coast reserves have been placed at 1,500,000,000 barrels. There is a difference in opinion as to the size of the district recognized as the Gulf Coast, but such a reserve does not seem too high.

With a reserve of nearly 2,000,000,000 barrels, a large number of prospects to be drilled, and with a number of natural advantages, the full length of the Gulf Coast strip will undoubtedly remain active for several years. A revival of the search for new reserves has been observed all over the United States. It is only natural that the Gulf Coast, with so many known and indicated salt domes and prospects should become an even greater center of field operations. No other section of the United States has so many indicated structures of any kind. Presence of a salt dome

does not necessarily indicate the existence of a major oil accumulation, but it is an excellent guide in any wildcat program.

Transportation Advantages

Natural and developed advantages along the Texas-Louisiana Gulf Coast have encouraged and supported the increased development campaign of the past 13 years. At only a few points along the coastal strip, except in the Louisiana swamps, have discoveries been far removed from some form of transportation facility. The central and inland portions of the strip have been especially accessible.

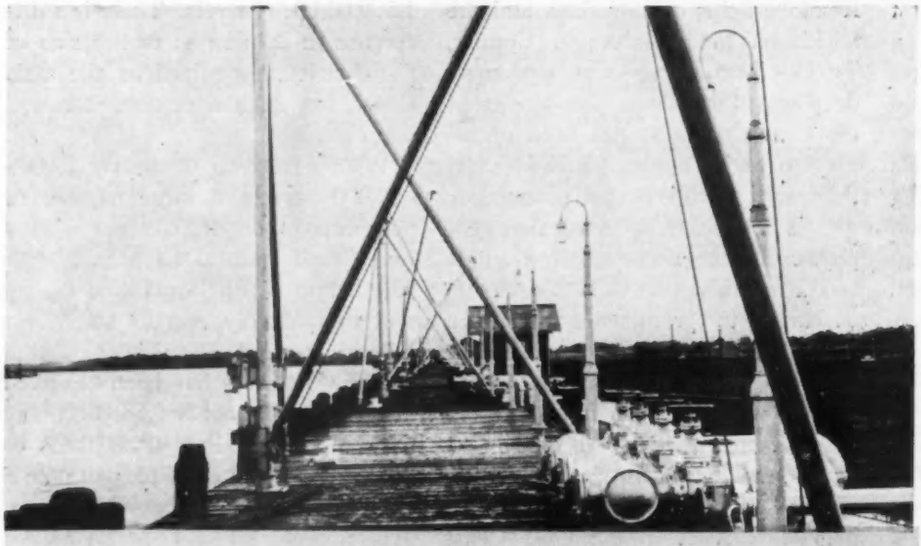
Proximity of the Gulf of Mexico has provided a natural outlet for crude and refined products intended for export. Direct ocean loading at refineries and pipe line terminals has reduced transportation costs to a minimum. The maximum movement of crude oil between field and tidewater along the entire coastal strip is not necessarily great. Improvement of these natural outlets has been recognized by operators seeking oil reserves along the Gulf Coast.

Operation of large refineries adapted to handling Gulf Coast crudes has represented an assurance of a fairly constant demand for a reasonable production of oil. A more fluctuating supply from areas connected to the Gulf Coast by pipe lines, and the advantage held by the less remote coastal fields practically guarantee the average Gulf Coast field a fair share of the prevailing market. Refinery demands have been mixed and varied, but Europe's preference for Gulf Coast pale oils and other products have aided the average Gulf Coast producer in his quest for outlets.

The elaborate pipe line system of the Gulf Coast has been a distinct factor in the development program since 1922. Trunk lines, shorter lines to deep sea loading terminals, and connecting lines have reduced new construction to a minimum, following new discoveries. A number of recent discoveries, including Conroe, Tomball and Cleveland, were only a few miles from one or more trunk pipe lines. A number of prospects have been drilled and proved largely on the strength of their nearness to pipe line outlets. Future development also will be affected by the location of pipe lines, although in the remote swampy districts it may prove less expensive to move the oil by water. In such districts, absence of pipe lines will not affect normal development. Pipe lines connecting several distant producing districts with Gulf Coast refineries and loading terminals have directly benefited the coastal strip, by virtue of their availability following discoveries.

Deep drilling should be considered as a full subject within itself, but its influence upon Gulf Coast development has been so pronounced that it must be included among the list of factors that have made the district an important producing section. Both the development of lower producing zones in originally shallow fields and more recent deep discoveries have gradually changed the oil map of the Gulf Coast. Rapid advancement in drilling technique has more than doubled the Gulf Coast reserve, and has opened for development several deep areas formerly regarded as non-productive. As the coastal strip demonstrated greater possibilities below 5000 feet, drilling practices kept pace and made possible the testing of indicated structures below 7000 feet with a greater ease than accompanied the early drilling of 2000-foot salt domes. The Gulf Coast has not attained its present position by intensive development of shallow domes, but rather by opening deeper producing zones in shallow fields and by outright discoveries at depths considered out of reach of the drill 20 years ago.

Gulf Coast crude oils possess an unusually uniform number of good properties. The search for new fields has been based on the assumption that additions to known reserves would be comparable to the average discovered previously. With a large number of untested prospects always in sight and with little fear that new fields would yield an unsuitable oil, wildcatting kept pace with geophysical and geological work responsible for mapping so many indicated salt domes.



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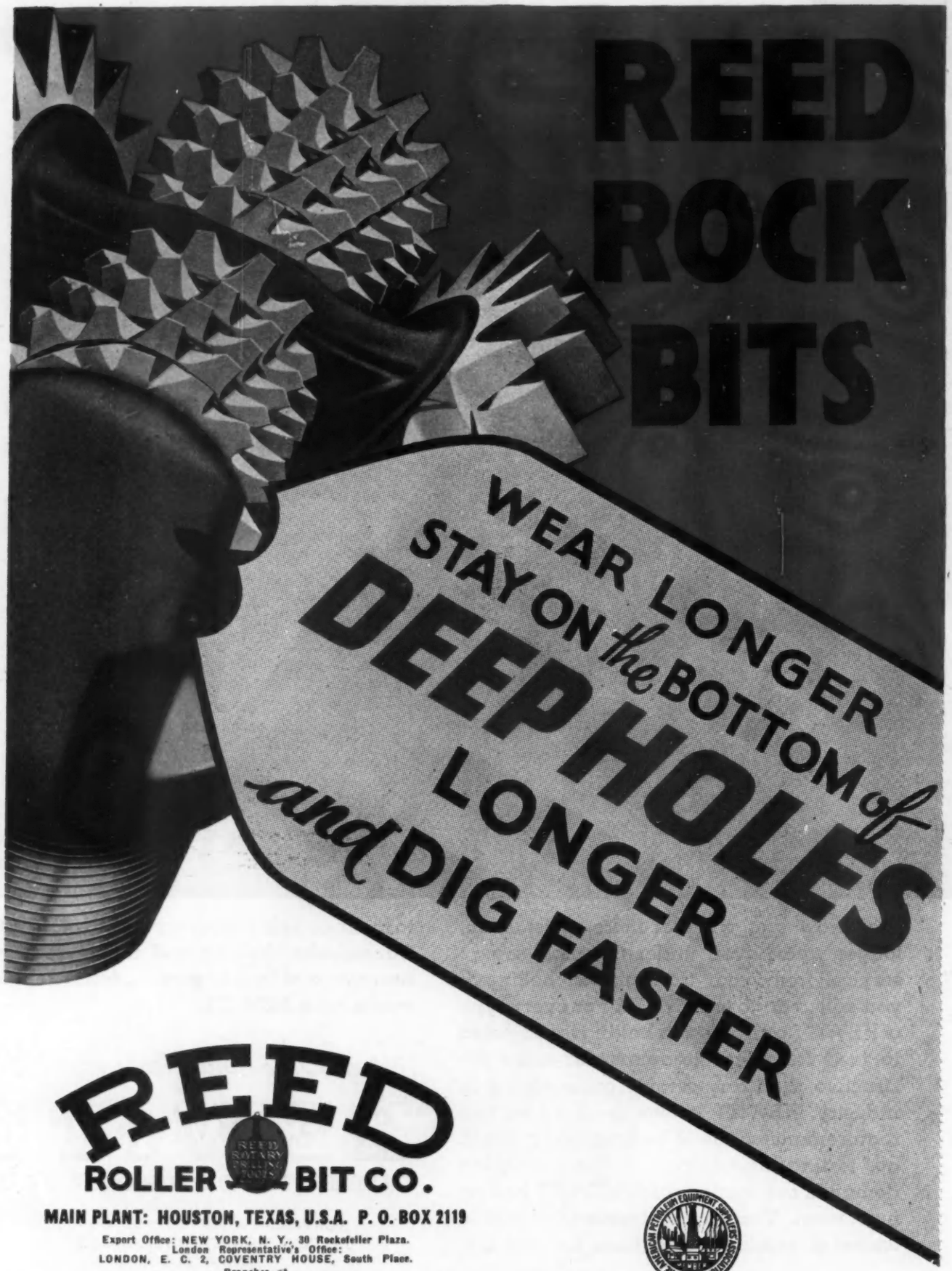

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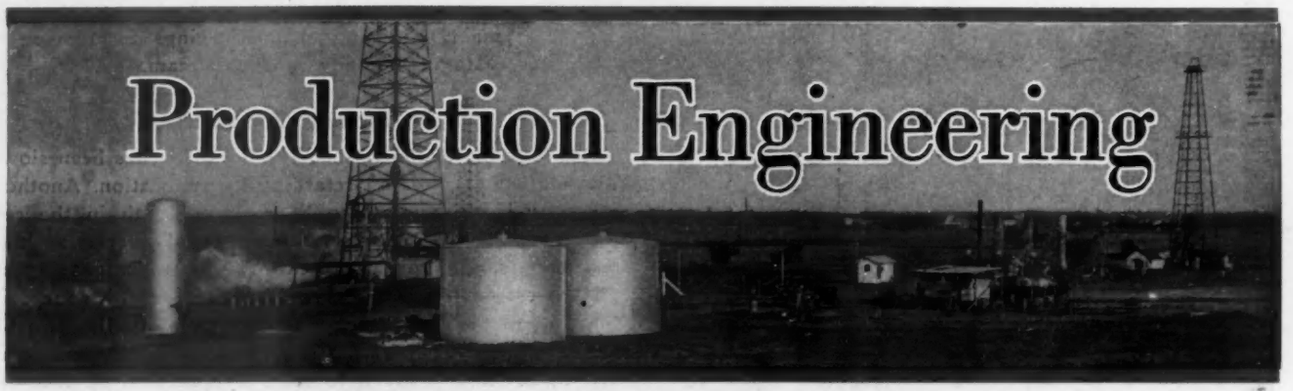


Repressuring Project *Is Benefited By Application of* Back-Pressure

C. E. MORRIS

Air and Gas Well Tester, The Texas Company

THE vast extension of the "Shoestring Pools" in Anderson and Linn counties, Kansas, merit more than a passing glance. Nor is it possible to compile a history of the development, structure, present status, etc., of the group in one article. However, in order to get an idea of their extent it is necessary to give a brief description as to their size and location. While these channel pools are more or less insignificant when compared with other large pools of much deeper production, they have contributed materially to each year's annual production of oil. These and thousands of other shallow stripper wells over this and other states of the Union have as a whole, so to speak, served as a nucleus or backbone of the industry as it skips from one major pool to another.

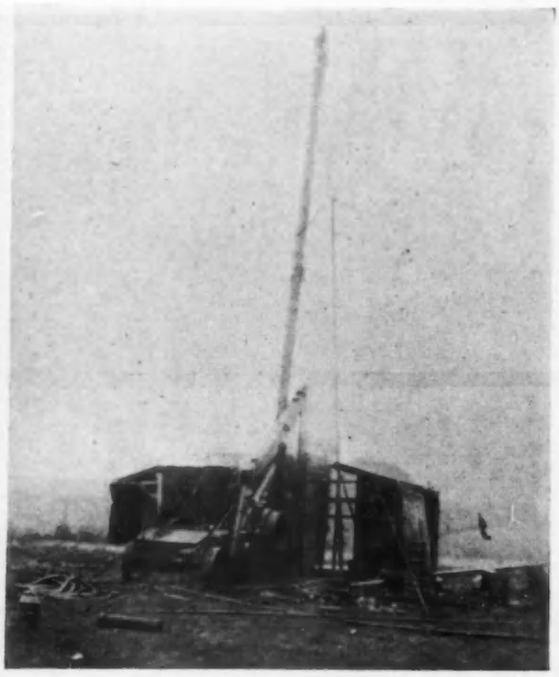
There are possibly a dozen or so "shoestring" pools, so-called because of their length and narrowness, geologically of the Cherokee Age, a number of which can be traced from head to mouth where they, as former streams, emptied into the one time Cherokee Sea under the present site of eastern Linn County and possibly extending into the edge of other surrounding counties. At the present time there are at least five such pools, which have been gradually developed since 1914 and extending on into the year 1929 before being fully developed. The flush production was fairly good and would possibly average in the neighborhood of 40 barrels. Some of the shoestrings averaged much higher individually. The two largest of these are in eastern Anderson County lying parallel east and west between Garnett and Bush City. They are each about 17 miles long and average ¼ mile wide. The most important field of Anderson County was discovered in 1921 and development extended into 1929. A shoestring pool six miles long and about 800 feet wide, located two miles east of Centerville, was developed from 1920 to 1924. Another pool about three miles long located two miles west of Centerville was developed about 1914 and 1915. Another early pool to be developed is located between Goodrich and Parker about 10 miles in length and ¼ mile wide, but is more or less disconnected in places. These shoestrings ranging in depths from about 600 to 850 feet apparently were all laid down at about the same age, although different sands are found at about the same depths in different localities. All these "shoestrings" in all probability were the beds of former streams and their location signifies a central point drainage into the Cherokee Sea during the Cherokee Age. These conditions have since been altered, which facts will be brought out in anticipation of subsequent articles prepared exclusively for this magazine.

In order to centralize on actual past history and accomplishments, and as to present and subsequent expectancies the remainder of this article is confined exclusively to the Bush City Shoestring.

Bush City Shoestring Pool

During the early development of this channel trend pool very little was known or understood about these long narrow bodies of production. As a result the development was slow and possibly more than a hundred dry holes were drilled before its course was definitely established. The west end of this trend is in Section 13-21s-19e, and the east end is in Section 28-20s-21e. This solidly connected producing shoestring follows a gently curved course in an east-west direction for eight miles of its length comprising the west half; thence northeast the same distance. Some 800 producing wells have been completed with an initial yield from 10 to 500 barrels of oil. The sand varies up to 50 feet in thickness and from 650 to 800 feet in depth. This producing horizon is significant, in that it is the most northern field in eastern Kansas producing light oil from the upper Bartlesville sand. Elsewhere bodies of this sand have produced only gas in this part of Kansas. Another fact that has contributed to the seemingly slow development in this area has been the fluctuating price of oil. Drilling is virtually at a standstill in these shallow pools when oil is at a sub-normal price. When there is a demand and prices justify, development breaks out in every corner.

The field has shown a high yield per acre. From 1926 to 1928 when activity in the pool was at its climax Ander-



Typical drilling rig used in Northeastern Kansas shallow production area.

son County produced more than 1,000,000 barrels of oil annually, most of which was produced from this pool. Over 5,000,000 barrels of oil have thus been produced, ranging from 34 to 36 Baume gravity, and of asphaltic base. It is significant that the locality's surface geology bears no kindred from which to determine these shallow producing formations above the Mississippian. The structure is commonly determined from the depth of the Iola limestone, that occurs 20 to 40 feet below the top of the Cherokee Shale. The producing sand is a channel shaped lenticular body 0 to 50 feet thick, and as indicated from well logs fingers out from the main trend at intervals where it was often picked up but oftener missed by the drill. The main producing channel swings from side to side as is customary in any flowing stream.

Repressuring Operations

Repressuring of the Bush City Shoestring has been slow. The market price of oil retarding its application. Another important fact that has to be reckoned with in the repressuring of this pool is a barren sand overlaying the producing sand with little or no break between, varying in thickness from two to 10 feet. It was generally conceded for a time that gas or air used for repressuring would stray off into this barren structure. This theory has been proved at least partly unfounded by practical application at several intervals on the trend, due possibly to the fact that the bottom of this barren structure may be cemented by mineral matter or mud in the sand so that the gas and/or air cannot migrate through. The producing horizon is 360 to 370 feet above sea level, hence sea level elevations are of little consequence. Little or no water is present. Deposition of accumulation as observed from initial production indicates much larger yields from the wells that are structurally high. These favorable conditions to repressuring are of considerable importance to the operators.

Repressuring Example

A repressuring project near the center of the shoestring was carried on recently for over a year with little results above straightening out the production curve and staying off the customary decline, and apparently was without profit. Three months from the time of its inception the air began to show up at the surrounding pumping wells 300 feet from the injection well, but seemed to carry little or no oil with it. The volume at the casing heads did not increase in any proportion favorable to the amount of injected air, indicating reservoir leakage. Not being en-

Compressor plant with injection well in foreground.

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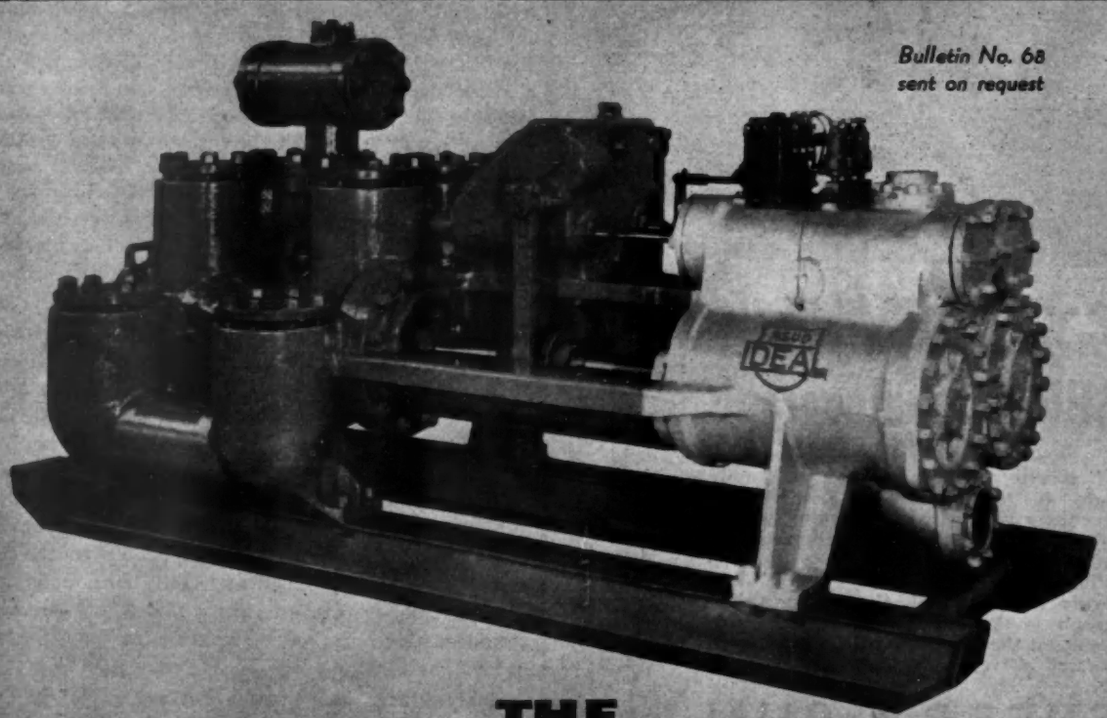

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tirely satisfied that this was the exact condition, about the time it was being considered advisable to dispense with repressuring it was decided to experiment with back-pressure, on the theory that the upper barren sand was harder and finer than the producing horizon and air would first penetrate the producing sand. As an experiment two wells were shut in for two weeks. These wells produce principally from a "pay streak" indicating that there is considerable reservoir space to repressure in order to penetrate the entire thickness of the sand. This would indicate and invite a possibility of air passing through the semi-barren sand, causing slippage and displacing very little oil. Therefore, it was necessary to fill up this part of the structure with sufficient pressure so that the air would thoroughly penetrate into the pay streak and start the oil moving. A barrel or so decrease was the result of the two wells shut in at the casing heads. A back-pressure was then put on the same two wells. In two weeks the production showed a slight increase. Other wells were subsequently back-pressured and each time accounted for a slight increase. In four months the production was increased 50 percent with no increase in inject volume. However, the volume was prorated into two wells instead of one, which condition had existed nine months prior to this increase and could therefore have contributed but little toward it. After this increase of production had been brought about, an idea was suggested that possibly the wells had not been entirely pumped off and only the pumping off of the wells brought about the increase, thus discrediting the efficiency of repressuring. So it will be good manners to take this into consideration for discussion, and allow it every benefit of the doubt. The following month of January, 1932, showed a further increase. This was the peak month. Inclement weather set in, causing considerable trouble at the wells and experimentation was discontinued temporarily. Back-pressure was released and for six months the production maintained its attained level, after which there was a sharp decline. The fact that a second increase was attained would prove without a doubt that repressuring was playing some important part relative to the attained increase. Also, by other theoretical problems worked out and applied since, the decline was stopped and an increase of about 35 percent over the production one year after first repressuring, is again retained. This fact would be directly in opposition to the suggested theory that the increase was due to a pumper's inefficiency.

Many points of interest were gained from this experiment. It was found that some wells pumped good at times under one certain pressure, and if increased or decreased the well would not pump satisfactorily. Wells had to be watched and back-pressure increased or decreased to get them to pump off. Some of the wells were not afftced in their pumping. Others would not pump, or would make only part of their production until it could be determined the amount of back-pressure applicable to the well. One well in particular pumped at exactly 20 pounds, and if the pressure was allowed to vary a few pounds up or down it would gas lock every few strokes each time it was bumped out of gas lock.

Repressuring has proven beyond a doubt on several projects along this channel pool that it is of a material benefit and an incentive to oil propulsion in this shoestring. About on third of the trend is under repressure at this time. Another one third or more is now under consideration for repressuring. The controlling factor—market price—will govern how soon the entire shoestring is finally repressured, or possibly some other artificial application for increased recovery might be adopted.

Cause of Low Power Factor *and* *Effect on the Capacity* of a Generator

W. C. LANE
Electrical Engineer

RECENTLY an executive of a small producing company let it be known that he is being annoyed by a thing called power factor. It seems that he expects to be called upon to tell a subordinate what to do with an alternating-current generator that is overheating. The generator is used to supply energy to a number of lightly loaded double-speed motors used to drive a group of pumping wells. It appears to be overloaded but he does not think this can be true for the engine is smaller than the generator and it handles its load with ease. He recalled that he was told that a low power factor will cause trouble and that it is the cosin of the angle between the current and the voltage, but this meant little to him when he heard it in school and it means less now.

In discussing the problem involved no attempt will be made to give a theoretical treatment of the subject. Perhaps a few homely ideas concerning the cause of the phenomenon and the solution of a specific problem will be of some assistance to those similarly situated, whose ideas are indefinite or have become clouded. Those versed in the subject will note that the effect of iron losses and certain other factors will not be taken into consideration.

Let it be assumed that G in Figure 1 represents the generator in question and that it is supplying energy to a single motor, M. A, represents an ordinary a-c ammeter for measuring the current supplied to the motor and V is a voltmeter for reading the electric potential. The apparent power or the volt-amperes supplied to the circuit is equal to the product of the readings of the two instruments. The term Kv-a in common use is this product divided by 1000.

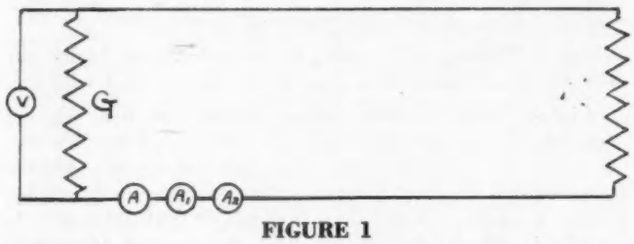


FIGURE 1

Wiring diagram of a simple single-phase alternating current circuit.

It is possible for one to insert two other dissimilar ammeters, A_1 and A_2 of special types in the circuit as shown, one of which will measure the current spent in magnetizing the iron of the motor and the other the current that produces the actual torque on the rotor. The first current designated as A_1 is a nuisance, but unfortunately it is necessary to have it in order for the motor to run. For a given motor A_1 has practically the same value at no load that it has at full load. Its magnitude depends on the design of the motor, the amount of iron in it, the air gap and some other things. A wattmeter traversed by this current will register zero for it represents energy stored in the iron during one part of a cycle and returned to the generator during the other half. The resultant flow of energy is zero as the meter will tend to read in a reverse direction one-half of the time.

The second ammeter, A_2 will record the current that does the useful work and its magnitude will vary with the load on the motor. A wattmeter connected in the circuit will be affected by this current only and will record the product of it and the voltage over the circuit. The actual power supplied to the motor then is,

(1) Actual Power = Volts $\times$ A_2

The apparent power, or volt-amperes is,

(2) Apparent Power = Volts $\times$ A,

Where A is the reading of the common type of ammeter that is affected by both currents A_1 and A_2. Now A_1 and A_2 are both alternating currents and they are out of time with respect to one another. That is, at the instant when one has its greatest value the other is passing through some intermediate value. For this reason A does not equal A_1 plus A_2. The relation is as follows,

$$(3)\quad A = \sqrt{A_1^2 + A_2^2}$$

The apparent power then from (2) is,

$$(4)\quad \text{Apparent power} = \text{Volts} \times \sqrt{A_1^2 + A_2^2} \text{ and}$$

$$(5)\quad \text{Actual power} = \text{Volts} \times A_2 = \text{Volt} \times \sqrt{A_1^2 + A_2^2} \times \sqrt{\frac{A_2}{A_1^2 + A_2^2}}$$

Or actual power = apparent power multiplied by the quantity,

$$(6)\quad \sqrt{\frac{A_2}{A_1^2 + A_2^2}}$$ called power factor.

By using this expression for power factor instead of the one commonly given it is easy to see why a double-speed motor operating at a light load on the low speed side has a low power factor. There is probably more iron in a 15/35, a 15/30 or a 15/40-horsepower motor than is found in a single-speed motor rated at 40-horsepower. Obviously, when one of these motors is operated at, we will say 50 percent of its low rating or at a 7½-horsepower load the magnetizing current, A_1 will be very large in order to

magnetize the great mass of iron in the motor. The amount of material involved is much greater than it is on a squirrel-cage motor rated at 7½-horsepower. The values of the different currents A, A_1 and A_2 for the double-speed motor are about as follows for a 7½-horsepower load.

$$A = 16,\ A_1 = 13 \text{ and } A_2 = 8.5$$

$$\text{From (6), Power Factor} = \frac{8.5}{\sqrt{13^2 + 8.5^2}} = .53$$

Obviously, a low power factor is due to the magnetizing current. On a load such as a bank of incandescent lamps where there is no iron in the circuit and no magnetizing current involved the value of the expression above becomes one.

Where motors are operated at a voltage higher than that for which they are designed the magnetizing current, A_1, is usually increased and the power factor becomes less. Reducing the voltage over a lightly loaded motor will reduce A_1 and thus improve the power factor. That is what takes place when the connections for a triple-rated motor are changed from a higher to a lower rating and the power factor is improved.

The load an ordinary generator will carry is based on the temperature produced by the load current, A, in its winding. The heat generated in a device of any kind is approximately proportional to the square of the current. It makes no difference whether this is a magnetizing current, A_1, or a useful current, A_2. As a matter of fact it is their resultant as measured by the ammeter, A. The power required to drive a generator is not affected materially by the current A_1. It seems evident that a load consisting of lightly loaded motors such as are used in the illustration above will overload the generator long before it will affect the driving engine. By changing the nature of the load on such a unit or improving the power factor by attaching some remedial device to the line the capacity of the generator will be increased.

When power is purchased for driving a load having a low power factor the lines, transformers and generators

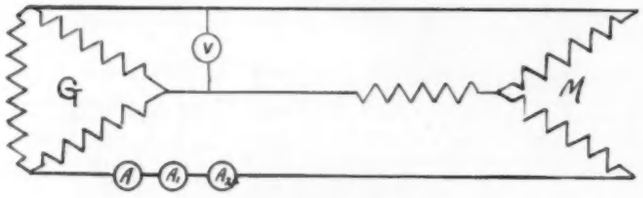


FIGURE 2

Wiring diagram of a three-phase alternating-current circuit. G represents a generator and M a motor.

of the vendor of power must be larger than they would be if the power factor of the load were high. Obviously, it costs more to serve such a customer and painful as it may be to him, his rate should be higher.

A low power factor reduces the efficiency of a system since the magnetizing current generates heat in the generator, lines, transformers and motors. Any current irrespective of its nature produces a heating loss in a conductor that is proportional to the square of its value. It was said above that a wattmeter records only the product of the voltage and the useful current, A_2. This statement should be modified for the meter reading actually includes the heating losses.

Another objection to a low power factor is that it makes it more difficult to maintain the voltage on a generator carrying such a load. It requires more direct current to excite the fields of a generator under such conditions and many cases of overloaded exciters have been traced to this cause.

As a specific illustration of the effect of a bad power factor on a small generating plant let it be assumed that in Figure 2 a 125 KV-a, 2200-volt, three-phase, 60-cycle generator is installed and that it is being driven by an engine of sufficient capacity to carry a 125 Kilowatt load continuously. First, let it be said that a capacity of 125

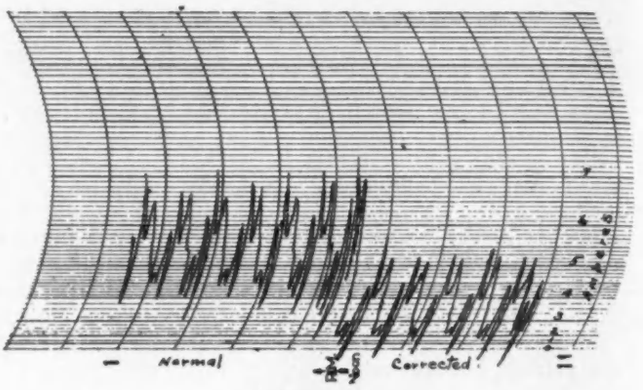


FIGURE 3

Current taken by a five-horsepower, 440-volt, three-phase, 60-cycle, 600 revolution per minute squirrel-cage motor when operated with and without the corrective effect of a three K. V. A. 440-volt static condenser.

KV-a means that the amount of the current the generator is capable of carrying is limited to the value obtained by solving the following equation.

$$125 = \sqrt{3} \times \text{Current} \times 2.2 \text{ or}$$

$$\text{Line Current} = 33 \text{ Amperes.}$$

At 80 percent power factor the capacity of the generator when fully loaded is only 100 Kilowatts for

$$\text{Power} = \sqrt{3} \times 33 \times 2.2 \times .80 = 100.$$

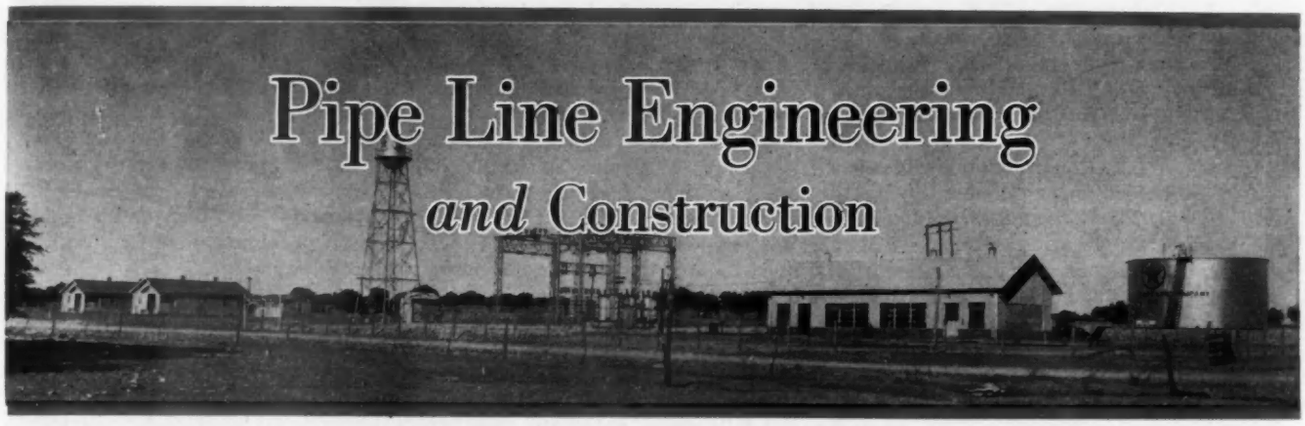
On the load under discussion consisting of a number of double speed motors 50 percent loaded with a power factor of .56,

$$\text{Power} = \sqrt{3} \times 33 \times 2.2 \times .56 = 70$$

That is, the engine is only .56 percent loaded under such conditions and of course it will handle the load with ease.

Lightly loaded double-speed motors are not the only type that have an inherently low power factor. Figure 3 is an actual current curve of a five-horsepower, 440-volt, 600 revolutions per minute squirrel-cage motor used to pump a shallow well. The normal current taken by the motor is shown on the left and the current taken after the corrective effect of a three KV-a static condenser has been added is shown on the right. While taking these curves the well was pumping at a normal rate, that is, the rate of performing the work was constant. It appears that the use of low-speed motors is not to be recommended unless provisions are made for correcting the power factor.

Power factor is not a fictitious quantity conceived by power companies as an excuse for adding a penalty to the rates. However, from the standpoint of the small plant involved in this discussion it may be said that since it is obvious that the power factor of the load on a generator affects its capacity materially, if more generator capacity is needed corrective measures should be applied. If one has an excessive amount of generator capacity and ample lines, power factor is of little moment since the actual cost of producing the energy lost is nominal.



Varied Problems *Were Encountered in Constructing California's* Newest Oil Line

JOHN C. ALBRIGHT

SO THAT more oil may be moved from the San Joaquin Valley to Southern California, and in line with the oil company's general rearrangement of transportation facilities, General Pipe Line Company, a subsidiary of General Petroleum Corporation, has built an 88-mile pipe line from its Lebec refinery and pump station to Torrance. The new route directs the line from Lebec, situated beside the New Golden State Highway on the Ridge Route, with an elevation of approximately 4200 feet above sea level, through the west side of Los Angeles to General Petroleum Corporation's tank farm at Torrance, which is only a few feet above tide water.

General Petroleum Corporation built the first pipe line from the San Joaquin valley to tide wate at Los Angeles in 1912. The old line, because of its general layout, requires the use of several pump stations to move Valley oil to the Los Angeles Basin. Since the company has developed increased production in Bakersfield, Mountain View and other fields in the area in Kern County, it was necessary to build the new pipe line.

The project involved the expenditure of about $1,000,000. The line will handle about 40,000 barrels of crude daily without the use of an intermediate pump station. By placing in operation a midway, electrical operated pumping station used as a booster only, the capacity of the line may be increased to as much as 60,000 barrels daily. The drop in altitude will be approximately 4125 feet, which will provide a static head of sufficient force to move the oil through the line with satisfactory results.

The line was constructed of ten-inch pipe, part of which is coated with a corrosion proof material and subsequently wrapped with heavy paper to compensate for soil stress. The entire right of way has been surveyed for soil corrosivity, which discloses the fact that the ground covered by the line through the ridge and foothills is only mildly corrosive, while some of the soils in the Los Angeles Basin are extremely corrosive. The corrosivity varies as to the season, being less destructive to pipe during the dry season than throughout the rainy months in the winter.

The right-of-way was divided into three construction sections for convenience in meeting the different problems involved. The first section took in the district covered by the line running from the Lebec pumping station to Castaic, a distance of 34 miles. This route is through the south slope of the ridge and foothills, but follows the grades downward beside the highway to obtain consistent drop in altitude without the usual "up and over" the hills.

The second section took in the country between Castaic and Soldiers Home, while the third ran from that point to the General Petroleum Corporation's refinery tank farm at Torrance.

It was generally considered by laymen that the first section represented the most difficulties in ditching, laying the line and maintaining it afterwards. The construction engineers engaged in accomplishing the actual laying of the line considered the last section to be the most difficult. The reason for this is the usually encountered conditions in cities, coupled with the crossing of interurban railways, the proximity of high-voltage transmission systems and the extreme corrosivity of the soils traversed by this section.

The pipe used in this new lime was made of seamless steel, the joints upset slightly at each end to provide for a flush joint, steamline steel gasket, which, when welded into place as the joints were tied together, offered no resistance to the flow of fluid, and which sealed each joint so that internal corrosion cannot start by cutting the interior of the pipe. The pipe is shipped bare from the steel mills to a steel plant in Los Angeles where it was treated and wrapped, then shipped by truck and trailer to the stringing line.

The general contract was awarded to Macco-Robertson, Ltd., Clearwater, California, who sublet a portion of the line to others equipped to construct transmission systems in that locality. The welding of the line was done by H. C.

Price, Inc., Bartlesville, Oklahoma, who used electric portable units for the job.

Three eastern steel mills are furnishing the necessary ten-inch seamless steel pipe for the project. Approximately 16,000,000 pounds of steel were required to complete the project.

Construction Problems

The difficulties encountered in laying the new pipe line through the foothills and through Sepulveda Canyon to the Soldiers Home at Sawtelle, were about on a par with those encountered as the line crosses the interurban lines and the streets on the west side of Inglewood. Few roads were crossed in the first 34 miles from Lebec pumping station to Castaic, but the rough country made it imperative to follow the drainage lines wherever possible. It was difficult at times to reach the right-of-way with the trucks without making numerous detours around rocky hills and over arroyas, and several suspended crossings are necessary.

In working the southern division, the streets and roadways from Torrance to Soldiers Home were followed to a great extent and cuts and tunnels in great numbers were made in this section of the construction project. Several 90° turns were necessary when following the streets in the outlying sections of the suburban towns. Pipe bends used were usually made on the job by cold bending the joints of pipe. The nature of the topping of a majority of the streets crossed made it possible to cut the asphalt surfacing previous to the running of the ditching machines. Air compressors were used largely for this purpose, with jackhammers and air-driven spades used by the men to loosen the harder topsoil after penetrating the surfaces of the street crossings. The asphaltic road material was moved away from the cuts by men using long handled shovels, but the main ditch cut with machines.

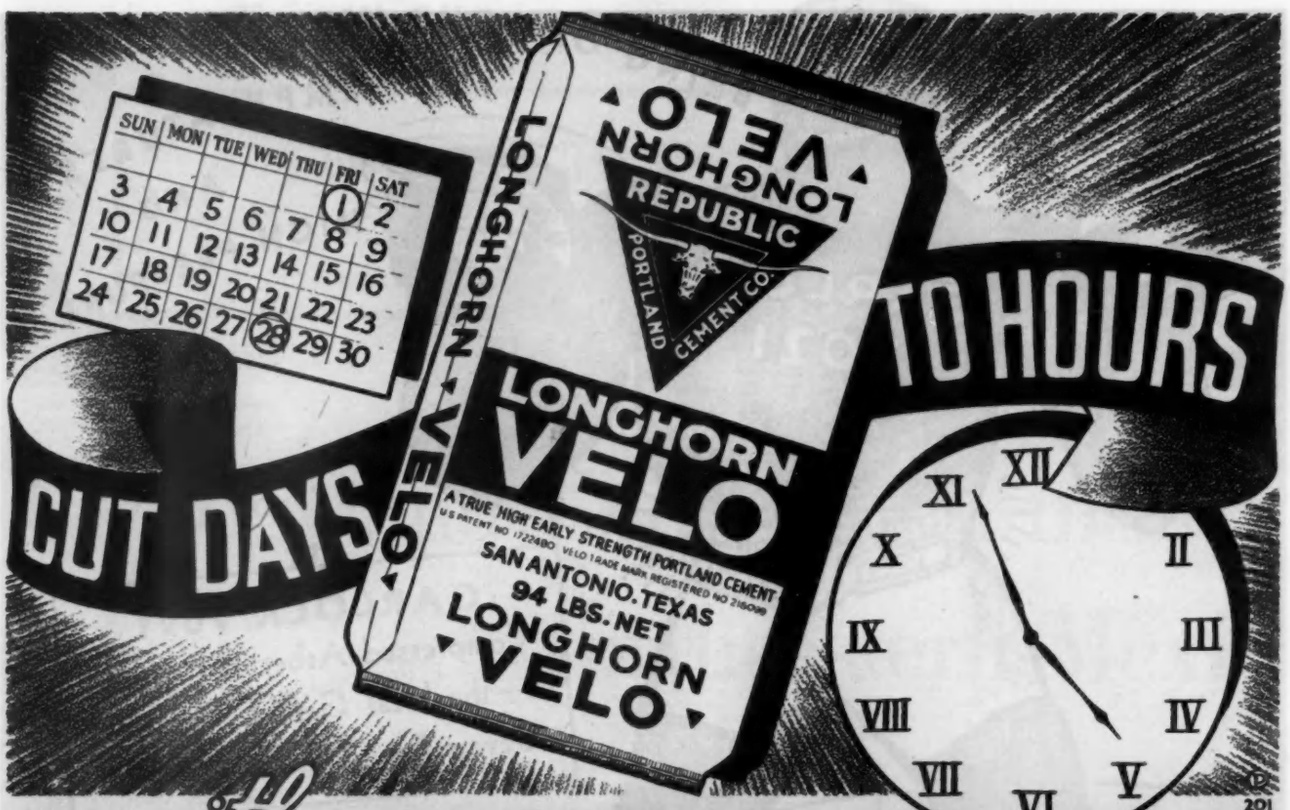
When crossing Pacific Electric Company's double tracks, as the pipe line enters the southwestern boundaries of Inglewood, a tunnel was cut, which was of sufficient depth that the pipe line was placed under all existing lines carrying gas and water. As the joints from which the new pipe line was being constructed had previously been made in double lengths, it required two mobile field cranes to handle the pieces when lowering them into the ditch. The joints which were placed in the tunnels under the railway crossing were pulled through from one side to the other, after a plug had been placed in the openings to prevent the interior of the pipe from becoming filled with soil and debris in the bottom of the excavation.

Electrolysis Protection

An insulating flange was used on each side of the Pacific Railway right-of-way, which was made up as a unit before being shipped to the field. The flanges were welded to joints of pipe before being lowered into the ditch and subsequently bolted together. This specialty is used in General Petroleum Pipe Line transmission system to prevent disintegration of the steel caused by electrolysis due to grounded currents of electricity originating in the power lines used to drive the interurban trains. Considerable difficulty has been met in the Los Angeles Basin by pipe line companies when going underground at the electric railway crossings. The soil is particularly corrosive to steel in some sections of Southern California, which is magnified greatly when stray currents travel along the pipe lines. The greatest deterioration of the pipe lines is at the point where the current leaves the surface, and is recognized by numerous pits which grow as time passes. With properly installed insulating flanges and dissipating grounds constructed so that the current may be removed as it is picked up, very little trouble has been reported.

Several welding crews were used in building the line, each welder in the crew joining his particular joint in the ditch after the long sections had been lowered by the heavy-duty field cranes.

Welder setting insulated flange on blocks to weld to 10-inch pipe



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GARLOCK

Geology and Exploration in Northeastern Mexico

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BECAUSE of the increased attention being devoted to Northern Mexico the accompanying article, prepared exclusively for THE OIL WEEKLY, should be of interest to operators of the United States. It deals with some of the problems with which a foreign operator in Mexico is forced to cope.

In addition there has been included in the paper a valuable dry hole and producer record of wells completed in the territory, and corrections have been made on existing geological literature of the region. The latter have been based largely on results of 40 wells, the majority of which were drilled subsequent to the publication of previous writings.

The author, J. L. Tatum, for several years has been recognized for his professional work in Mexico as a geologist. Contacts shown on the accompanying map, while representing Mr. Tatum's personal opinion of conditions, will be of value to those engaged in following the trend from South Texas into Northeastern Mexico.

IN this paper only a brief review of the geology of Northeastern Mexico will be made, with corrections of a previous paper by the same author on the region: "General Geology of Northeast Mexico," which appeared in THE OIL WEEKLY, August 7, 1931, and in the Bulletin of the American Association of Petroleum Geologists, Volume 15, Number 8, August, 1931.

The corrections are necessitated by increased knowledge gained since by the study of drilled wells of various sorts and extensive studies of the paleontology. Much of the credit for the paleontological information is due to Jarvis Garst, paleontologist for the Mexican subsidiaries of Continental Oil Company, although no individual can claim credit for the present state of the knowledge of the geology of the region for many men have worked there and the discussions of the geology have been free and sometimes heated.

Lower Cretaceous

The Lower Cretaceous of the Texas section rapidly changes at the International boundary from a comparatively thin heterogeneous section to a thick lime section varying in thickness and somewhat in age in its upper and lower limits, and has been described by various authors. The upper parts of this lime section are the principal producing horizons in the Tampico fields, the Tamasopa and Tamaulipas limes of various authors.

Upper Cretaceous

The Eagleford and lower Austin of Texas become hard flaggy limes interbedded with usually dark and sometimes petroliferous shales whose limits also vary somewhat in age. This is usually known as the San Felipe and is productive in parts of the Panuco region.

That section above the middle Austin is one great shale body only slightly sandy locally and is usually divided on the basis of paleontology into two formations: the Papagayos (lower) and the Velasco. In places the uppermost part is younger than any Cretaceous known in Texas. In the Humble-Empire Guerrero well southwest of Zapata, Texas, it is difficult to separate from the Midway. No such difficulty is known on the surface outcrop.

Eocene

Eocene beds are generally thicker in Northeastern Mexico than they are known to be in Texas.

Midway

Midway is similar in appearance to that in Texas, but is much thicker. It approaches a maximum known thickness of 3000-3500 feet. It consists mostly of clays with distinctive weathering. As in Texas, it is divisable into a lower sandy phase and an upper non-sandy one.

Wilcox (Indio)

The Indio is essentially the same as in its type locality in Southwest Texas. Northwest of Aldamas a highly fossiliferous sand section begins to come in the lower part of this formation. It is characterized by a large Venericardia. This fossiliferous zone reaches its maxi-

mum development west of China, Nuevo Leon, on the road to Monterrey. The entire formation is approximately 2500 feet in thickness.

Carrizo

The Carrizo has the same features as in its type locality in Southwest Texas, and is traceable from there to about 35 miles south of China, Nuevo Leon, where it grades into shale and is no longer easily distinguished from the adjoining formations. Down dip in the Carlos Cantu well No. 3 of Consolidated Oil Companies of Mexico it cannot be recognized by its lithology. This formation varies from 400 feet to 1000 feet in thickness.

Mount Selman

The Mount Selman is a sand-shale section, in part fossiliferous, and is the same as that described and mapped as Cook Mountain and Mount Selman in the paper referred to in the introduction to this article.

Cook Mountain (Ceratabulimina Zone in Wells)

In Northern Mexico the Cook Mountain formation is almost entirely clay of distinctive yellowish brown weathering, and in well samples it is dark brown, almost black. It becomes more sandy north of the San Juan River, but its other characteristics remain the same and the formation can be mapped as a unit with more than usual accuracy. Its upper and lower limits correspond rather closely to faunal breaks. This is the same as the formation previously mapped as "Yegua" by the author, and is similar in appearance to the Yegua as originally described, and that mapped by Deussen in "Geology of the Coastal Plain of Texas West of the Brazos River" U.S.G.S. Prof. Paper 126, 1924.

Yegua (Epionedes Yeguaensis Zone)

The Yegua is the same formation as that previously described by the author as "Fayette" and is the "Fayette" of Dumble near Meir and at Roma, Texas. On the outcrop it is almost entirely sand. North of the Tamaulipas-Nuevo Leon state line it is difficult to separate this formation from the overlying. South of that line, the contact is sharp.

Jackson

Jackson is not easily divisible into its various Texas units from the surface lithology. In the subsurface it may be divided into the faunal zones. The Cockfield is probably represented in Nuevo Leon by the "Arenal" and in Tamaulipas by a sandy section with red clays. In Tamaulipas the upper members of the Jackson are the same as in South Texas. South of the Zacate structure in Nuevo Leon the upper Jackson is represented by a thick section of greenish gray bentonitic clays with a few thin flaggy sandstones which was previously mapped by the author as Frio. It is fossiliferous. In appearance it is similar to that mapped by Deussen as "Frio" in the vicinity of Three Rivers in Live Oak County, Texas. In the Zacate wells of Compania Petroleo Aldamas y Bravo (Continental) the Jackson has a total thickness of more than 5000 feet without having been drilled through. Most of this increase in thickness is in the Cockfield and Diboll zones. The Cockfield being more than 2400 feet, the Diboll about 1600 feet, the Hockley about 700 feet and the uppermost Jackson zone about 650 feet. In the Fronteriza No. 1, Camargo (Sta. Anita), about 20 miles to the north, there is a normal Jackson section.

Oligocene

Just east of the V in the Nuevo Leon-Tamaulipas line there is a scarp covered with beds similar in appearance to the Vicksburg above, but which are reported to carry fossils more nearly akin to Jackson. These probably correspond to the questionable zone in the upper Jackson of South Texas. These beds are less than 300 feet thick on the outcrop.

Vicksburg

Beds previously mapped as "Gueydan" include both the above and beds of Vicksburg age. The lower portion is marine. Near the Tamaulipas border the marine section is 500 feet thick and becomes thicker southward and in wells to the east. Along the Conchos River the entire section is marine. In the Rio Bravo wells of Sinclair and Mercedes (Standard of New Jersey) in Northern Tamaulipas near the Nuevo Leon border the marine Vicksburg is about 2500 feet thick without having been drilled through. There is some question as to the top of this formation on the surface. Some geologists place it on a large gravel lense which forms a scarp some 40 miles long in eastern Nuevo Leon, while the author still places it at

Wildcat Wells of Northern Mexico

Wells Completed or Abandoned

1. Guerrero 1, Humble Oil & Refining Company, Tamaulipas. T.D. 7891 feet—dry and abandoned.

2. Control 201, Control de Administracion del Petroleo Nacional, Tamaulipas. T.D. 3605 feet—dry and abandoned. Shows.

3. Camaron 1, Control de Administracion del Petroleo Nacional, Nuevo Leon. T.D. 5320 feet—dry and abandoned. Sulphur water.

4. Ochoa 1, Control de Administracion del Petroleo Nacional, Tamaulipas. T.D. 755 feet—dry and abandoned.

5. Nacionales 206, Control de Administracion del Petroleo Nacional, Nuevo Leon. T.D. 1700 feet—dry and abandoned. Junked hole.

6. Contca 1, Kelly, Tamaulipas. T.D. 4107 feet—dry and abandoned. Shows.

7. Santa Anita 1, Compania Fronteriza de Petroleo, Tamaulipas. T.D. 3405 feet—dry and abandoned.

8. Santa Monica 1, Frick et al, Nuevo Leon. T.D. 3604 feet—dry and abandoned. Shows.

9. Santa Monica 5, Frick et al, Nuevo Leon. T.D. 2260 feet—dry and abandoned. Shows.

10. Santa Monica 6, Frick et al, Nuevo Leon. T.D. 1730 feet—dry and abandoned. Shows.

11. Guimbarda 2, Plaza & Devine, Tamaulipas. T.D. 1100 feet—dry and abandoned.

12. My M2, Munoz & Martinez, Tamaulipas. T.D. 1545 feet—producer—gas, spraying oil.

13. My M3, Munoz & Martinez, Tamaulipas—drilling below 500 feet, standard tools.

14. Carlos Trevino 1, Ohio-Mex Oil Co., Coahuila. T.D. 5920 feet—dry and abandoned.

15. La Presa 1, Ohio-Mex Oil Co., Tamaulipas. T.D. 2015 feet—producer—gas.

16. La Presa 2, Ohio-Mex Oil Co., Tamaulipas. T.D. 1536 feet—producer—gas.

17. Rancherias 1, Ohio-Mex Oil Co., Tamaulipas. T.D. 1270 feet—gas well. Not producing.

18. La Palma 1, Ohio-Mex Oil Co., Nuevo Leon. T.D. 2500 feet—dry and abandoned.

19 La Palma 1-A, Ohio-Mex Oil Co., Nuevo Leon. T.D. 4367 feet—dry and abandoned.

20. Zambrano 1, Ohio-Mex Oil Co., Coahuila. T.D. 4430 feet—dry and abandoned.

21. Cloete 1, Ohio-Mex Oil Co., Coahuila. T.D. 4185 feet—shut down—standard tools.

22. Rancherias 2, Ohio-Mex Oil Co., Tamaulipas, standard tools. T.D. 2500 feet—dry.

23. Chapa 1, Compania de Petroleo Mercedes, Nuevo Leon. T.D. 5003 feet—dry and abandoned.

24. Camargo 1, Compania de Petroleo Mercedes, Nuevo Leon. T.D. 5750 feet—dry and abandoned.

25. Chancaca 3, Compania de Petroleo Mercedes, Nuevo Leon. T.D. 3500 feet—dry and abandoned.

26. Chancaca 4, Compania de Petroleo Mercedes, Nuevo Leon. T.D. 3500 feet—dry and abandoned.

27. Encantada 1, Compania de Petroleo Mercedes, Tamaulipas. Rotary. Dry and abandoned.

28. Rio Bravo 3, Mercedes-Sinclair Companies, Tamaulipas. T.D. 5005 feet—abandoned. Oil, gas and salt water.

29. Charro 1, Mercedes-Sinclair Companies, Tamaulipas. T.D. 4752 feet—dry and abandoned.

30. Rio Bravo 4, Mercedes-Sinclair Companies, Tamaulipas. T.D. 3795 feet—abandoned. Oil, gas, salt water.

31. "El Charro" Rio Bravo 5-A, Mercedes-Sinclair Co's.. rotary. T.D. 2500 feet—dry and abandoned.

32. Zacate 1, Consolidated Oil Co.., Nuevo Leon. T.D. 5006 feet—abandoned. Oil and gas shows.

33. Carlos Cantu 1, Consolidated Oil Co., Nuevo Leon. T.D. 2080 feet—abandoned. Gas shows.

34. Carlos Cantu 3, Consolidated Oil Co., Nuevo Leon. T.D. 6521 feet—dry and abandoned. Gas shows.

35. Carlos Cantu 2, Consolidated Oil Co., Nuevo Leon. T.D. 3666 feet. Working over. Gas.

36. China 1, Consolidated Oil Co., Nuevo Leon. T.D. 2563 feet—dry and abandoned.

37. Banquete 1-A, Consolidated Oil Co., Nuevo Leon. T.D. 1902 feet—dry and abandoned.

38. Zacate 2, Consolidated Oil Co., Nuevo Leon. T.D. 6264 feet.

39. San Ambrosio 1, Mexican Gulf Oil Company, Nuevo Leon, rotary. T.D. 9012 feet. Salt water.

40. Las Uvas Ranch 1, Navarro Smith, Coahuila, drilling 225 feet.

Map of Northeast Mexico

the base of his "Oakville?" of the paper mentioned in the introduction.

Upper Oligocene(?)

Beginning with a coarse lenticular sand which looks like the South Texas Oakville, there are a series of green and red clays, reworked volcanic ash, medium to coarse sand, and lenticular beds of chert gravel about 3500 feet in thickness. In the North these beds are non-fossiliferous but grade into marine beds on the Conchos. This formation forms a low rolling topography similar to the Vicksburg below but without strike ridges so well defined. The soil is light and sandy and similar to that of the formation below.

Reynosa

On the Reynosa-Monterrey road from about four miles east of the Nuevo Leon line to Reynosa there is a series of caliche covered sands and light colored clays with some thin beds of gravel. These have a similar surface appearance as the "Reynosa" of Deussen in Duval County and grade southward into the marine San Fernando beds of Dumble, which he thought upper Oligocene. They are now thought to be middle Miocene in age. These beds are probably not less than 2000 feet in thickness.

East of the San Carlos Mountains marine beds outcrop from upper Eocene to the coast.

Oil and Gas

Some 39 wells have been drilled in Northern Mexico from west of Del Rio, Texas, to south of the Samfordyce field. Six of these are gas wells, two of which are rather small. One of these gas wells, producing from the top of the Mount Selman, My M2 (Munoz and Martinez), south of Meir, is showing high gravity oil. Three of the dry holes, Zacate No. 1 and Rio Bravo Nos. 3 and 4, had appreciable oil shows, which may result in the discovery of two new oil fields. The first mentioned well had its shows in the Jackson, and the other two in the marine Vicksburg. No wells have been drilled for oil within 75 miles of the coast, north of the Sota La Marina River.

Lands and Laws

Mexican law is derived from Spain and follows the Napoleonic code. There is no such thing as our common law with its equity. All contracts are valid and follow the word of the contract as long as it is in accordance with the written code. No contract not in accordance with the code is valid nor can a person waive rights that are guaranteed to him by the written law. The courts are the final arbiter in questions of interpretation. Precedent has some weight but not so much as in the United States.

The notary has a much more important function than in the United States. He is always a highly trained lawyer, except that judges of municipal (county) courts where there are no licensed notaries, may act as notary. Most contracts must be signed before a notary or his substitute and must be recorded in their books.

Foreigners may not own real property within 100 kilometers (66 miles) of the international borders nor within 50 kilometers of the coasts. To own real property in other parts of the country or mineral rights in any part foreigners must first obtain permission from the federal government. Most rights of this nature are held by Mexican corporations, which before the law are persons. The laws governing corporations are liberal and they are easily and cheaply formed. All Mexican corporations must have their offices and books in Mexico.

A substantial part of the national revenues is derived from stamp taxes of various sorts, and for this reason books must be kept in a form provided by law. It is important that a trained accountant familiar with the tax laws be employed to supervise these books. Concerns that do not have sufficient business to employ a full time accountant may in the larger cities find ones to work part time. All corporations must have an official residence and their books must be kept at that place and must at all times be available for inspection by the tax inspectors. Anyone doing business in Mexico will save himself both money and annoyance by consulting a competent Mexican lawyer.

Petroleum Law

In the petroleum law of December 31, 1925, now in effect, lands are divided into three categories: Pre-constitutional (1917), Post-constitutional, and Free lands. In addition to these there are federal-owned National lands and waters and National Reserves, the latter established by executive decree.

Pre-constitutional lands are those on which work had been done towards utilizing petroleum prior to the date of the constitution of 1917. Almost anything susceptible of proof, such as drilling, geological reports, or contracts, even sales that involved a price greater than the usual agricultural value has been taken as work in the sense intended by the law. Owners of petroleum rights on lands under this category had one year under the law, afterwards extended an additional year, in which to apply for a 50-year concession without costs and without obligations except those of police and taxes.

Post-constitutional lands are those on which work had been done between the dates of the constitution of 1917 and the date of the petroleum law. Owners of rights on these lands were given one year from the passage of the law in which to apply for an ordinary concession.

Free lands were all other lands of private ownership, not set aside by executive decree as National Reserves. On land in this class the first making application was entitled to a concession.

Concessions might be granted on areas up to 20,000 hectares (½ million acres) and for a term of 30 years, divided into an exploration period of five years which might be extended for an additional five years and an exploitation period of 30 years, both dating from the date of the concession. After the 30 years the concession expires and the concessionare has the right to demand payment from his successor for installations left on the property. Neither concessions nor contracts are extendable after the period stated in the contract.

Obligations

Holders of Free land and Post-constitutional concessions have the obligation to spend stated amounts each year in exploration work, the amount depending on the size of the concession. The maximum amount required to be spent on any concession is 100,000 pesos (about $28,000 dollars) at the present rate of exchange. On concessions smaller than the maximum lesser amounts are required to be spent. In addition to the annual work requirements a moderate deposit of guarantee must be made with each concession, the amount of this deposit depending on the size of the concession.

All lands on which concessions are not granted or pending belong to the National Reserves, as well as the land on which concessions have been dropped or cancelled. These lands are to be developed by the new semi-government owned company commonly known as the "Petromex." The predecessor of this company has let contracts on some of the National Reserves and it is generally presumed that the Petromex will do likewise.

Concessions are cancellable for failure to do the required annual work requirements each year, and for failure

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How to Acquire Petroleum Lands

Petroleum land can at present only be acquired from a present concessionaire or from the Petromex.

Pre-constitutional concessions depend on the land title and the purchaser should investigate the land title. This is usually more difficult and expensive than in the States, for there are no regular abstract companies and the work they ordinarily do must be done by a search of the original records.

On other lands the concession is not dependent on the land title and it is only necessary that the concession be investigated to be assured that it is not cancellable and that the current taxes of 20 centavos per hectare (about 2½ U. S. cents an acre) have been paid. This tax is applied to all concessions for petroleum. Some of the large companies are in the mood to farm out some of their concessions as well as most of the smaller holders.

Trading in Mexico is carried on in virtually the same manner as in the United States. It is well to have references as to financial responsibility, and it is often desirable to trade through a responsible third party who is known to the people with whom you wish to trade. In trading with the government or semi-governmental agencies it is well to avoid the hundreds of irresponsible persons, known locally as "coyotes," who infest Mexico City and claim to be relatives or bosom friends of high governmental officials. There are responsible people who make a business of representing companies and individuals before the government, but one is not very likely to meet these in the bars and hotel lobbies. If the person who comes to Mexico takes the same care he does at home he will not be nearly so likely to leave with a thin purse and a dislike for all things Mexican. If he leaves any mistaken ideas he may have of racial and personal superiority well locked up at home and comes with the idea that he is to deal with intelligent and cultured people who are likely to be just as frank or just as cunning as himself he will probably get along pretty well.

Operations

Mexico has a petroleum department with agencies in various oil centers to see that the petroleum laws and technical regulations are enforced. These regulations are for the conservation and protection of these resources and are for the most part reasonable.

Permits to drill must be secured. This requires the location of the proposed well by a licensed engineer and the posting of bond for the proper plugging of the well. Permits may usually be acquired within a few days. Accompanying the drilling application there must be a proposed casing program which may be changed by request to the agency if made before passing the maximum depth for casing in the drilling permit. At least one string of casing must be cemented according to a plan submitted to the agency and in the presence of an inspector.

The location must be verified by an inspector, as well as the testing by pressure or bailing of the cementation. The cementation is tested by pressure before drilling the plug and by pressure or bailing after the plug is drilled. Cement with accelerator must set four days, and without, eight days. The well must be plugged according to a plan submitted to the agency and in the presence of an inspector.

All shows must be reported during the course of drilling and must be cemented on plugging. Weekly drilling reports showing the amount drilled, shows if any and the log must be made to the nearest agency. The petroleum inspectors have the right to inspect the well at any time.

The author in many years experience has found the petroleum agencies and inspectors fair and usually helpful and with the disposition towards a liberal and fair interpretation of the laws and regulations. Infractions, where committed unwittingly, have been punished by the minimum penalties provided by law. He has never offered a bribe nor has he been approached for one by any petroleum inspector.

Companies must employ 80 percent Mexican labor, except in cases of skilled labor that cannot be filled by Mexicans, in which case permission may be secured to use a larger percentage of foreign labor. It is at present virtually impossible to bring labor of any sort into the country unless one can demonstrate to the department of labor that such labor is not available in the country. This applies to technicians as well.

Operation costs in Northern Mexico are higher than in most of the United States, but not materially so. Skilled labor is higher and it usually must be housed and fed. Common labor and office help is cheaper. Living expenses are about the same. Materials are higher because of duties and longer transportation. This varies for different classes of material, but will average about 20 percent. There is no proration and wells may ordinarily be produced close to their safe capacity.

Change of Anglo-Persian Company Name is Likely

It is possible the name of Anglo-Persian Oil Company will be changed to Anglo-Iranian Oil Company at the next meeting of stockholders in June or July as a result of the Iranian government request that such a change be made.

Iran, formerly Persia, gave official notice of change of the nation's name March 21 from Persia to Iran. Request for the greatest operator in the country to change its name to Anglo-Iranian came as a natural sequence.

It is likely, also, that the institution known as the Imperial Bank of Persia will shortly become the Imperial Bank of Iran.

Montevideo Refinery To Operate on S.A. Crude

Administracion National de Combustible Alcool y Portland des Uruguay, (A.N.C.A.P.) will run crude produced in Ecuador by Anglo-Ecuadorean Oilfields, Limited, and crude produced in Peru by Lobitos Oilfields, Limited, according to an agreement obtained by Rodolfo P. Peracca, agent.

A.N.C.A.P.'s new refinery at Montevideo is under construction and part of pipe line runs of the above nations will be diverted to it from the United States and Europe when the refinery is completed.

Lobitos Oilfields, Limited, has 502 wells on production in Peru, and Anglo-Ecuadorean has 391 wells on production in Ecuador.

China's Prospecting Work Yields Results

China's oil prospecting work in northern Shensi carried on recently by the Planning Committee of the Government's General Staff, Nanking, has brought good results, according to C. Y. Hsieh of The National Geological Survey of China. Among five holes drilled, two already have struck oil. The No. 101 hole at Yenchang is producing about 10 barrels daily at 60 meters, and the No. 201 hole at Yenchuan is yielding about 20 barrels per day at 100 meters. The oil prospects in the Yenchuan district is especially promising because of the existence there of several favorable structures.

The National Geological Survey of China soon will send a party to Szechuan to study the oil possibilities there. Should field studies of the structures give good indications, prospecting holes will be drilled.

MARKETS and STATISTICS

Prices Lower in California But Continue Firm Elsewhere

DESPITE the uncertainties that have arisen regarding the future of oil regulation following invalidation of the N.R.A. codes, the petroleum industry's markets have continued generally in unchanged status. The Pacific Coast market situation, however, represents an exception. In that region petroleum product prices dropped last week, and it was indicated further declines might occur. Crude prices there were holding unchanged, meanwhile, and there were prospects that voluntary proration would stave off any reductions.

The market disturbance on the Pacific Coast was connected with the collapse of the N.R.A. Following the N.R.A. downfall, the code-authorized Pacific Coast gasoline marketing agreement ceased to be effective, without any prospects of being revived. Surplus gasoline that was being absorbed by the Pacific Coast Petroleum Agency was thrown, consequently, upon the open market. Price cutting, especially tank wagon and retail, has resulted. The depressed prices were still confined, late last week, to the southern portion of the state.

In the Los Angeles area service station postings on third-grade gasoline had been pulled down by some independents as low as 10½ cents a gallon, including four cents taxes. But for most independents and some major companies minimum postings were 12½ and 13½ cents, while other majors in reducing prices June 6 came down only to 14½ cents. There were possibilities, meanwhile, that prices would be further depressed, under the pressure of surplus gasoline; and that the low prices might extend into northern Califorina, and perhaps farther.

California producers have been assured crude prices will not be cut, if they adhere to production quotas under their voluntary proration program. They have, so far, been holding output down around levels comparable with those of previous months, indicating crude prices are fairly safe.

Tank Car Prices Higher

Outside of California prices from well to service station have been mostly unchanged for several weeks. Practically the only change last week was a readjustment of a favorable nature, improvement having occurred in tank car prices of higher-octane gasoline throughout the Mid-Continent.

Premium grade U. S. motor gasoline, 68-70 octane, was bringing one-eighth cent per gallon more last week than in the previous week, throughout the Mid-Continent, being priced at 5⅜ cents a gallon at East Texas and North Texas refineries, and at 5⅝ cents in the Group Three, Oklahoma, region. Standard grade, 62-67 octane, was unchanged in North Texas and East Texas, at 5 cents a gallon; but it was up an eighth cent in Oklahoma at 5¼ cents. Third grade gasoline, below 62 octane, was everywhere unchanged in the Mid-Continent, bringing 4⅝ cents a gallon in East Texas and North Texas and 4¾ cents in Oklahoma.

East Texas Tank Car Shipments

Week Ending June 1, 1935

PRODUCTS	No. Cars	Estimated Gallons
Gasoline	551	4,444,531
Casinghead Gasoline	154	1,301,218
Fuel Oil	190	1,780,198
Distillate	74	599,631
Kerosene	56	458,180
Gas Oil	19	153,712
Topped Crude	11	109,449
Naphtha	9	73,181
Residuum	7	56,947
Total	1,071	8,977,047
Total Previous Week	1,273	10,841,121
Interstate	577	.....
Coastwise	250	.....
Intrastate	244	.....
Total	1,071	.....

Kerosene was also unchanged in North Texas and Oklahoma, selling at 3⅞ cents a gallon in both areas. But in East Texas it was down a quarter cent from the previous week at 3⅝ cents.

Texas Disturbed

Although service station prices outside California were generally unchanged from the previous week, there has been some further weakening of the retail markets in portions of Texas, due to the pressure of hot gasoline moving by truck out of East Texas. In the Houston area third grade gasoline was being offered by greater numbers of stations at 12 cents a gallon, including five cents taxes, although major companies continued to hold to the 15-cent posting.

The volume of hot oil output in East Texas is generally conceded to be at least some higher than in recent weeks. Estimates of such production in most instances are over 20,000 barrels daily. A few weeks ago the similar estimates were around 10,000 to 15,000 barrels.

Refined Market Gained Strength During Week

STATISTICALLY the entire refined products market and especially the Group 3, Oklahoma, market is in the best shape that it has attained during the past three years with stocks of finished and unfinished gasoline far below the average for the period of the depression. Continued buying from the open market of motor fuels by major refiners has held the market in check during a short period which otherwise probably would have seen some softening. Despite this buying which was done for its stabilizing effect, stocks of the major refiners have been kept well in line and the season of increased consumption finds the refining and marketing branches of the industry in good condition.

The past week saw the third grade motor fuels, 62 and below octane, move up from ⅛ to ¼ cent per gallon to make the absolute low 4⅝ cents. Fuel and burning oils maintained a strength slightly above the average for this period of the year but was showing signs of sagging as the season of low consumption started. Kerosenes were following the same path.

California Gasoline Prices Are Reduced

MAJOR companies of California June 6 reduced the prices of gasoline in Southern California. Four major companies reduced the retail price of third-grade to 14.5 cents, with an added cent for regular grade, and 17.5 cents for premium. Two of the larger companies met the price established by larger independents of 13.5 cents for third grade. Tank wagon prices are three cents under retail price, and all prices include four cents tax.

Retail Petroleum Dealers Association reduced its official retail price to 13.5 cents, and June 7 further reduced the price to 12.5 cents. The tank wagon price is three cents less.

Bootleg gasoline is retailing at 10.5 to 12.5 cents.

Further cuts are expected due to throwing on the market of excess gasoline formerly purchased by the Pacific Coast Petroleum Agency, which ceased to operate June 1.

There is great fear that a disastrous gasoline price war is in the offing. Nothing can stop such a war, it is believed, other than some method of buying the surplus of about 500,000 gallons a day from smaller independent companies. The cut-price situation rules from Kern County south to San Diego. So far, Northern California has not been affected, but possibly it will be.

East Texas Hot Oil Production Continues

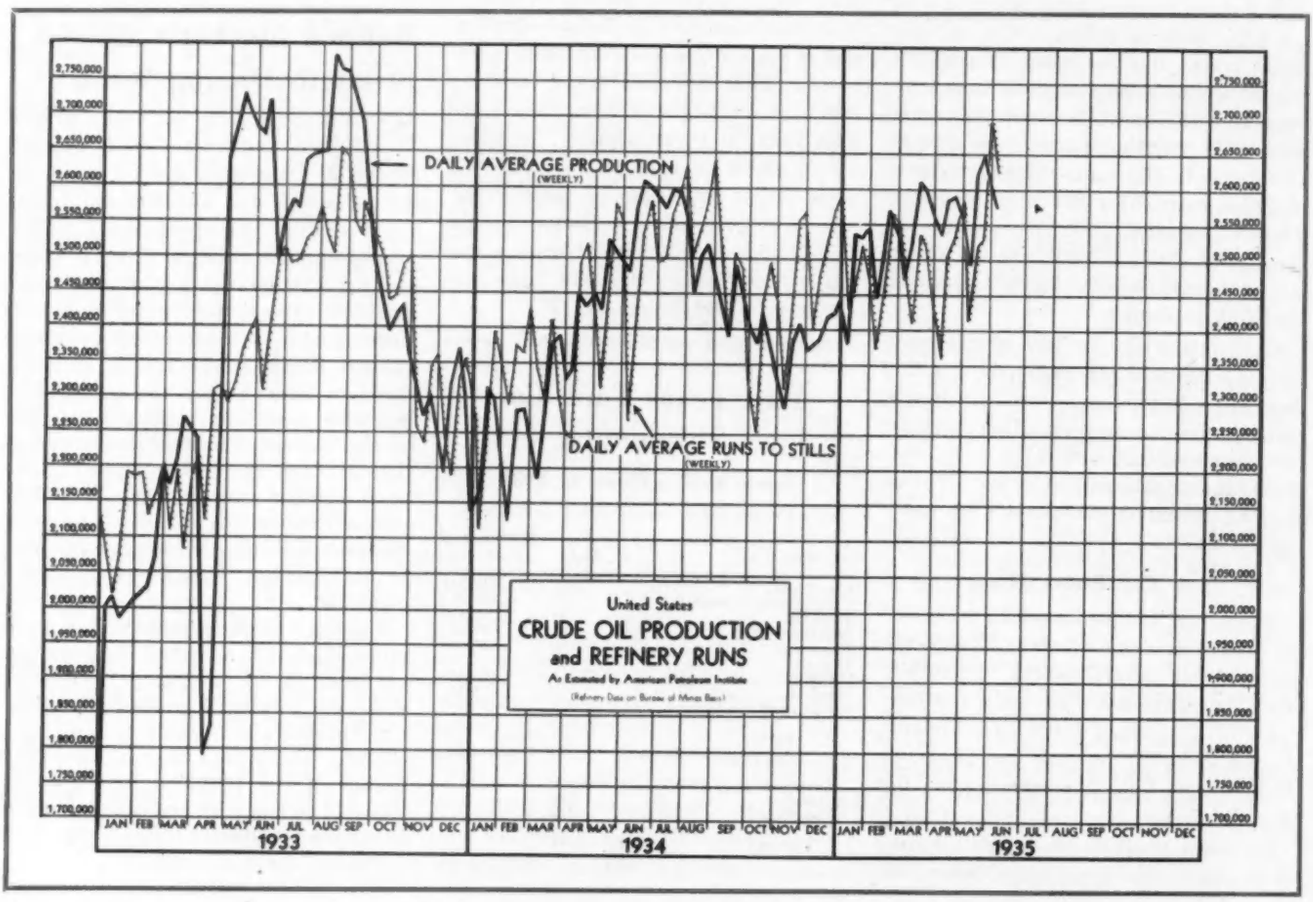
ILLICIT crude production in the East Texas field continues to average about 25,000 barrels daily, according to unofficial estimates that are virtually borne out by an analysis of current sales of refiners absorbing the contraband oil. The East Texas plants processed an average of 54,880 barrels daily during the week ending June 3, with approximately 21,000 barrels daily representing legally produced crude supplies. Tank truck shipments of gasoline for the week amounted to about 2,493,000 gallons, while rail movement of gasoline was estimated at 4,444,531 gallons. Twenty refineries were in operation last week, and all were receiving tendered crude, according to records of the railroad commission, but the majority of the plants are also credited with taking on a sizeable volume of contraband crude and claiming exceptionally high rate of gasoline recovery.

Gasoline moved under the sanction of the state and federal boards was firm at 4⅝ cents per gallon, while questionable material marketed via tank trucks ranged from 4 to 4½ cents per gallon in price.

Nominal fines and short jail terms assessed lately against refiners and their plant personnel by the state has not cut down violations as would normally be anticipated. Plant owners have retaliated by launching several important federal court tests challenging the jurisdiction of the federal tender board and also several important measures of regulation recently applied by the state. These pending cases are considered important in view of the possibilities of the trial judges being influenced by stand taken by the United States Supreme Court in striking down the National Recovery Act.

Louisiana Proration Increase in South

Shreveport, La.—South Louisiana fields were given all of the 12,300-barrel increase in the allowable for the state for June under the monthly allocation announced by Dr. J. A. Shaw, director of



the minerals division, Louisiana Conservation Commission, "umpire" for state production. South Louisiana's allowable for June was placed at 111,300 barrels compared to 99,000 barrels for May. North Louisiana's allowable which is not divided into fields remained at 21,000 barrels.

The proration among South Louisiana fields follows:

Proration of South Louisiana Districts

Bayou Choctaw	750
Bayou St. Dennis	1,100
Black Bayou	975
Bosco	20,000
Caillou Island	7,750
Cameron Meadows	2,600
Darrow	525
East Hackberry	6,250
Evangeline	2,400
Four Isle	1,600
Gillis	4,050
Gueydan	250
Iberia	1,350
Iowa	20,000
Lake Barre	8,250
Lake Washington	1,500
Lake Hermitage	300
Leeville	13,900
Lockport	1,500
Port Barre	4,350
Roanoke	4,250
Starks	550
Sulphurmines	2,500
Sweet Lake	1,400
Vinton	2,750
White Castle	450
Total	111,300
North Louisiana	21,000
Total for state	132,300

Hope to Hold Crude Price in California

Los Angeles.—Oil Umpire J. R. Pemberton for California, announced June 6 he had been assured by crude oil purchasing companies of the state there will be no cuts in the price of crude, if the producers do their part and eliminate all production in excess of quotas.

Production in the state the first few days in June is no more than usual for the first part of previous months, and only a few operators have opened their wells beyond usual custom. The worst offenders are several companies that refine and market their own products and do not sell production to pipe line companies or others.

Extend Life of Recovery Administration

Washington, D. C., June 7.—By a vote of 264 to 121 the House of Representatives today passed the measure extending the life of the recovery administration until April 1, next, after defeating a number of amendments, including one by Representative Treadway of Massachusetts to transfer the trade practice provisions of the codes to the Federal Trade Commission.

Simultaneously with the passage of the bill it was announced that President Roosevelt had accepted the resignation of Donald R. Richberg as chairman of the Industrial Recovery Board and chief counsel of the NRA, effective June 16.

Production Within Limits Recommended Under Code

UNITED STATES crude oil production last week (ending June 8) was 82,875 barrels per day higher than in the previous week, but it was 9325 barrels under the daily allowable that had been recommended for June by the federal government under the oil code. The nation's output of last week was 2,641,675 barrels daily.

California and Louisiana were above their recommended allowables, but the other three of the nation's five leading oil producing states, Oklahoma, Kansas, and Texas, produced under their allocations.

California's output averaged 554,500 barrels daily, compared with a quota of 512,700 barrels, and the previous week's production of 467,000 barrels daily. While this was a sharp gain for the state, it was not greater than customary for the opening portion of the month. Under the oil code, California regularly showed production above the allocation early in each month, but then in the latter part of the month compensated by producing less than the allowable.

Although California was left without government-enforced proration with collapse of N.R.A. oil code control, the producers of the state quickly subscribed to a voluntary proration program, similar to that they had used prior to the N.R.A. period. There has been, so far, successful cooperation in the new program.

Louisiana last week averaged 137,000 barrels production daily, which was nearly 5000 barrels a day more than the quota fixed by the federal government, and about the same amount above the previous week's output. Louisiana production has been steadily climbing in recent months, due to opening of new fields in the coastal section of the state.

Oklahoma production for the week of June 8 averaged 487,675 barrels daily. That was about 7000 barrels a day less than in the previous week, and more than 26,000 barrels per day less than the federal allocation.

Texas production last week averaged 1,039,000 barrels daily, about 5000 barrels a day more than in the previous week, but

United States Crude Oil Production

Estimates Compiled by THE OIL WEEKLY

District or State	Barrels Daily for Week Ending June 8	June 1
TEXAS—		
Texas Panhandle	61,300	57,100
North Texas	58,700	58,500
West Central Texas	25,700	25,800
West Texas	151,200	151,100
East Central Texas	48,500	48,800
*East Texas Field	455,400	452,800
South Texas	59,100	59,400
Texas Gulf Coast	179,100	181,100
*Total Texas	1,039,000	1,034,600
OKLAHOMA—		
Oklahoma City	143,800	138,950
Seminole Area	125,300	126,925
Tatums	5,100	5,100
Lucien	10,675	12,500
Fitts	8,075	15,925
Others	194,725	195,375
Total Oklahoma	487,675	494,775
KANSAS—		
Ritz-Canton	8,125	7,450
Voshell	4,125	4,850
Nikkel-Hollow	7,350	8,950
Sedgwick	8,625	9,950
Burrton-Haury	21,100	26,375
Others	92,775	95,650
Total Kansas	142,100	153,225
LOUISIANA—		
North Louisiana	22,200	22,500
Louisiana Gulf Coast	114,800	110,400
Total Louisiana	137,000	132,900
ARKANSAS	31,200	31,400
CALIFORNIA—		
Long Beach	75,300	58,000
Santa Fe Springs	40,500	34,000
Huntington Beach	46,000	33,000
Dominguez	21,200	20,500
Inglewood	11,000	8,500
Ventura Avenue	39,000	39,000
Seal Beach	8,800	7,000
Midway-Sunset	55,000	47,000
Elwood	12,500	12,500
Kettleman Hills	52,500	54,500
Playa del Rey	19,000	11,500
Mountain View	20,000	10,000
Others	153,700	131,500
Total California	554,500	467,000
MOUNTAIN STATES—		
Wyoming	35,100	33,500
Montana	10,400	10,200
Colorado	4,200	4,500
Total Rocky Mountain States	49,700	48,200
NEW MEXICO	51,100	51,300
EASTERN STATES	109,200	106,300
MICHIGAN	40,200	39,100
*Total United States	2,641,675	2,558,800
*Surreptitiously produced oil in East Texas not included in above figures, estimated at	20,000	20,000
Grand total including surreptitious production	2,661,675	2,578,800

Crude Runs to Stills; Finished and Unfinished Gasoline; Gas and Fuel Oil Stocks; and Cracked Gasoline Production, Week Ended June 1, 1935

(Figures in thousands of barrels of 42 gallons each)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		Stocks of Finished Gasoline			(a) Stocks of Unfinished Gasoline	(b) Stocks of Other Motor Fuel	Stocks of Gas and Fuel Oil	Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Bulk Term., in Trans. & Pipe Lines	Total at Refys., Term., etc.				Potential Rate	Reporting		Daily Average
		Total	%										Total	%	
East Coast	612	612	100.0	531	86.8	6,065	10,784	16,849	888	225	9,967	534	469	87.8	84
Appalachian	154	146	94.8	92	63.0	1,221	902	2,123	325	135	686	79	78	98.7	18
Ind., Ill., Ky	442	424	95.9	343	80.9	6,318	3,184	9,502	826	60	4,254	349	338	96.8	107
Okla., Kans., Mo	453	384	84.8	249	64.8	3,239	2,214	5,453	680	455	4,103	256	228	89.1	51
Inland Texas	330	160	48.5	70	43.8	1,094	112	1,206	267	1,015	1,898	148	105	70.9	23
Texas Gulf	617	595	96.4	500	84.0	5,488	204	5,692	1,691	260	9,280	399	393	98.5	123
Louisiana Gulf	169	163	96.4	121	74.2	872	580	1,452	286	.....	3,428	77	74	96.1	18
North La.,—Ark	80	72	90.0	59	81.9	193	106	299	31	225	292	46	44	95.7	9
Rocky Mountain	97	60	61.9	42	70.0	1,002	.....	1,002	108	55	782	46	39	84.8	12
California	852	789	92.6	469	59.4	7,740	1,862	9,602	1,076	3,000	64,046	274	274	100.0	46
TOTALS WEEK: June 1, 1935	3,806	3,405	89.5	2,476	72.7	33,232	19,948	53,180	6,178	5,430	98,736	2,208	2,042	92.5	491
May 25, 1935	3,806	3,405	89.5	2,536	74.5	34,207	19,020	53,227	6,079	5,290	97,657	2,208	2,042	92.5	516

Below are set out estimates of Crude Runs and Cracked Gasoline Production on B. of M. Basis for Week Ended June 1, 1935, compared with June 1934 Bureau figures.

Estimate B. of M. Basis, June 1, 1935	2,625		545
Estimate B. of M. Basis, May 25, 1935	2,685		570
U. S. B. of M., June 1934: Daily Average Crude Runs	2,535	U. S. B. of M., June 1934: Daily Average Cracked Prod.	489

(a) Amount of Unfinished Gasoline contained in Naphtha Distillates.
(b) Estimated. Includes Unblended Natural Gasoline at refineries and plants: also Blended Motor Fuel at plants.

approximately 20,000 barrels daily less than the federal allocation.

Kansas output of 142,100 barrels daily last week was about 12,000 barrels under the federal allocation to that state, and about the same amount under the previous week's production rate.

East Texas Crude Production Increasing

Kilgore, Texas.—Crude production in the East Texas field is again approaching the 500,000-barrel daily mark. Allowable production from 17,469 completed wells, including 2856 classed as marginal wells, amounted to 461,931 barrels on June 4, according to records of the Railroad Commission, while unofficial estimates on the volume of illicit production varies from 25,000 to 30,000 barrels daily. Average individual well allowable for the field is now 26.44 barrels daily.

Official hourly potential rating of all wells in the field on June 4 for proration purposes was listed at 13,277,090 barrels, or at rate of 318,650,260 barrels daily. This highly inflated hourly potential rating was boosted 98,861 barrels on June 1 when new open flow gauges were taken on two "key wells," causing the output of the field to jump about 2500 barrrels daily, and the removal of 68 wells from the marginal class.

Bureau's Wyoming Station to Reopen

Laramie, Wyo.—The Bureau of Mines research petroleum station will be reopened at the University of Wyoming within the next 30 days. This announcement was made by H. P. Raue who arrived here Saturday from Bartlesville, Oklahoma, to consult with the executive committee of the University of Wyoming for office and laboratory space for the station. The station was abolished two years ago as a matter of government economy, and is being reopened under a special federal grant for the station on a bill introduced by Senator Joseph C. O'Mahoney of Wyoming. The station ran tests on Wyoming oils, geologic samples, and made special studies of Wyoming black oils and its uses. The research bureau was one of the principle factors in the development of Wyoming black oil for road oiling purposes.

Dallas, Texas.—District headquarters of Texas Seaboard Oil Company have been moved from the First National Bank Building to the enlarged Gulf States Building.

Comparison of Permits Granted for New Wells

STATE—	Week Ending June 1	Total this Mo.	Total this Year	Total this Date Last Year	1934 Year Total
Arkansas.	1	1	16	19	100
Californ	12	12	211	212	629
Louisiana.	15	15	334	335	799
Kansas...	34	34	411	393	1,015
Michigan.	8	8	198	206	460
Oklahoma	53	53	918	906	2,045
Texas....	381	381	4,446	4,353	10,550
Total..	504	504	6,534	6,424	15,598

CRUDE OIL PRICE QUOTATIONS

(Figures Represent Basic or Flat Prices—Revised to June 7, 1935)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$ .84	2¢	40—$1.08	9-29-33
N. and N.-C. Texas	28— .79	2¢	40— 1.03	9-29-33
Texas Panhandle				
Gray County	34— .79	2¢	40— .91	9-29-33
Carson-Hutchinson	34— .69	2¢	40— .81	9-29-33
West Texas				
Ector, Pecos, Wk'lr	*.75			9-29-33
Crane, Upton, Howard and Glasscock	*.70			9-29-33
East Texas	*1.00			9-29-33
Texas Gulf Coast				
Conroe	35— 1.09	2¢	40— 1.19	9-29-33
Tomball	*1.15			9-29-33
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge	Below 20— .82	2¢	34— 1.12	9-29-33
South and S.W. Texas	Below			
Refugio (Light)	20— .82	2¢	34— 1.12	9-29-33
Refugio (Heavy)	*.85			9-29-33
Saxet	*.85			9-29-33
Mirando	*.80			9-29-33
Pettus	*1.05			9-29-33
Salt Flat	*.87			9-29-33
Darst Creek	*.87			9-29-33
Arkansas				
El Dorado (Light) and Rainbow	29— .79	2¢	40— 1.03	3-17-34
El Dorado East Field and Smackover	*.79			9-29-33
North Louisiana	29— .79	2¢	40— 1.08	9-29-33
Urania	*.85—*.87			1- 1-34
South Louisiana	Below			
Lookport	20— .80	2¢	34— 1.10	9-29-33
Iowa, Cameron Mds.	Below 20— .70	2¢	34— 1.00	9-29-33
Rocky Mountain States				
Salt Creek	29— .84	2¢	40— 1.08	9-29-33
Elk Basin	*1.17			9-29-33

*All gravities—flat rate.
†Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Grass Creek (Light)	*$1.17			9-29-33
Big Muddy	*1.01			9-29-33
Rock Creek	*1.02			9-29-33
Sunburst	*1.35			9-29-33
Lance Creek	*1.02			8-25-33
Osage	*.62			8-25-33
Cat Creek	*.45			8-25-33
Pondera	*.65			8-25-33
Hog Back, N. M.	*1.00			9- 8-33
Lea County, N. M.	*.75			9-29-33
Mid-West States				
Lima	*1.15			2- 1-35
Illinois	*1.13			1- 5-34
Princeton	*1.13			1- 5-34
Western Kentucky	*1.13			5-22-35
California				
Signal Hill	14— .65	1¢	16— .66	9- 6-33
	17— .69	2¢	22— .84	9- 6-33
	23— .88	3¢	30— 1.09	9- 6-33
Seal B., Alamitos Hts.	19— .65	3¢	20— .68	9- 6-33
	21— .72	4¢	22— .76	9- 6-33
	23— .81	4¢	26— .93	9- 6-33
	27— .98	4¢	30— 1.10	9- 6-33
Huntington Beach	14— .65	4¢	15— .69	9- 6-33
	16— .72	3¢	19— .81	9- 6-33
	20— .83	3¢	28— 1.07	9- 6-33
	29— 1.09	3¢	30— 1.12	9- 6-33
Inglewood	14— .65	4¢	16— .73	9- 6-33
	17— .76	4¢	18— .80	9- 6-33
	19— .82	4¢	20— .87	9- 6-33
	21— .90	4¢	22— .94	9- 6-33
	23— .97	4¢	24— 1.01	9- 6-33
Playa del Rey	14— .65	1¢	15— .66	9- 6-33
	16— .69	4¢	17— .73	9- 6-33
	18— .76	4¢	19— .80	9- 6-33
	20— .83	4¢	21— .87	9- 6-33
	22— .90	4¢	23— .94	9- 6-33
	24— .97	3¢	25— 1.00	9- 6-33
			26— 1.04	9- 6-33
Olinda-Brea Canyon	14— .65	4¢	16— .73	9- 6-33
	17— .76	3¢	28— 1.10	9- 6-33
Athens-Rosecrans Domingues	23— .83	3¢	24— .86	9- 6-33
	25— .90	4¢	26— .94	9- 6-33
	27— .97	3¢	29— 1.04	9- 6-33
	30— 1.08	4¢	31— 1.12	9- 6-33
			32— 1.15	9- 6-33
Elwood (fob ship)	33— 1.03	3¢	37— 1.15	9- 6-33
Torrance	14— .65	1¢	15— .66	9- 6-33
	16— .69	3¢	20— .81	9- 6-33
	21— .83	3¢	26— .98	9- 6-33

*All gravities—flat rate.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Richfield	15—$ .65	2¢	16—$ .67	9- 6-33
	17— .70	4¢	20— .82	9- 6-33
	21— .85	4¢	22— .89	9- 6-33
	23— .93	4¢	24— .97	9- 6-33
	25— 1.00	4¢	27— 1.08	9- 6-33
	28— 1.11	4¢	29— 1.15	9- 6-33
Whittier-LaHabra	15— .65	3¢	18— .74	9- 6-33
	19— .78	3¢	24— .93	9- 6-33
Montebello	19— .65	1¢	20— .66	9- 6-33
	21— .69	3¢	22— .72	9- 6-33
	23— .76	4¢	24— .80	9- 6-33
	25— .85	4¢	26— .89	9- 6-33
Coyote Hills	16— .65	3¢	19— .74	9- 6-33
	20— .78	3¢	29— 1.05	9- 6-33
	30— 1.09	3¢	34— 1.21	9- 6-33
Santa Fe Springs	21— .72	4¢	22— .76	9- 6-33
	23— .79	4¢	25— .87	9- 6-33
	26— .90	4¢	28— .98	9- 6-33
	29— 1.01	4¢	30— 1.05	9- 6-33
	31— 1.08	4¢	33— 1.16	9- 6-33
	34— 1.19	4¢	35— 1.23	9- 6-33
	36— 1.26	4¢	38— 1.34	9- 6-33
New Hall, McKittrick, Kern River	14— .57		19— .57	9- 6-33
Midway-Sunset, Elk Hills, Buena Vista Hills	17— .57	4¢	18— .61	9- 6-33
	19— .64	3¢	22— .73	9- 6-33
	23— .77	4¢	33— 1.17	9- 6-33
Lost Hills	17— .57	4¢	21— .73	9- 6-33
	22— .76	3¢	30— 1.00	9- 6-33
Coalinga	17— .57	1¢	18— .58	9- 6-33
	19— .62	3¢	21— .68	9- 6-33
	22— .72	3¢	25— .81	9- 6-33
Wheeler Ridge	17— .57	1¢	18— .58	9- 6-33
	19— .61	3¢	25— .79	9- 6-33
Kettleman Hills	33— .93	3¢	39— 1.11	9- 3-33
Pennsylvania				
Bradford	*2.20			5-16-35
Sw Pa. Pipe Line	*1.92			5-16-35
Eureka Pipe Line	*1.87			5-16-35
Buckeye Pipe Line	*1.77			5-16-35
Corning Grade	*1.32			10- 2-33
Michigan				
Central Michigan	*1.20			9-30-33
Muskegon	*.70–1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33

*All gravities—flat rate.

Summary of Wells Completed in the United States

Week Ending June 1, 1935

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total Completions 1935	Total Completions this date 1934
Alabama	...	...	...	...	.....	3	1
Arkansas	2	2	...	...	35	76	24
California	13	7	2	4	9,505	323	154
Colorado	...	...	...	...	.....	5	7
Illinois	...	...	...	...	.....	8	5
Indiana	...	...	...	...	.....	78	67
Kansas	20	18	...	2	8,745	585	340
Kentucky	3	3	...	...	295	70	43
Louisiana	15	3	4	8	1,895	311	290
Michigan	8	5	2	1	3,095	166	172
Mississippi	1	...	...	1	.....	11	13
Montana	3	3	...	...	520	31	49
New Mexico	5	4	1	...	3,810	112	39
New York	...	...	...	...	.....	...	4
Ohio	28	8	15	5	125	586	366
Oklahoma	41	23	3	15	25,600	980	813
Pennsylvania	3	...	2	1	.....	65	136
Texas	242	189	4	49	688,400	4,919	3,881
Utah	...	...	...	...	.....	...	3
West Virginia	16	6	8	2	40	213	188
Wyoming	4	3	...	1	4,700	22	17
Total this week	404	274	41	89	746,765	8,545	6,617
Total last week	361	227	33	101	547,775	...	...
Total this year	8,545	5,622	749	2,174	15,927,960	...	...

MAJOR PRICE CHANGES

	Penna. (Nat. Tr.)	Mid-Cont. (36 Gr.)	Calif. (26 Gr.)
March 5, 1933	.....	.....	Cut 24.
May 2, 1933	.....	Cut 19.	.....
May 9, 1933	Cut 20	.....	.....
May 22, 1933	Up 10.	.....	.....
June 19, 1933	Up 10.	Up 19.	.....
June 26, 1933	Up 10.	.....	Up 9-12
July 6, 1933	Up 13.	Up 10.	.....
July 17, 1933	Up 15.	.....	.....
July 28, 1933	Up 15.	.....	.....
August 11, 1933	Up 10.	.....	.....
August 24, 1933	.....	Up 10.	.....
August 30, 1933	Up 15.	.....	.....
September 6, 1933	Up 10.	Up 10.	Up 15.
September 8, 1933	.....	Up 15.	.....
May 1, 1934	Up 10.	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25.	.....	.....
January 4, 1935	Up 15.	.....	.....
February 4, 1935	Up 15.	.....	.....
May 16, 1935	Cut 15.	.....	.....

CRUDE PRODUCTION TAXES

Oklahoma—Five percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Three percent of gross value at well and ½-cent per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

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REGISTERED U.S. PAT. OFF.

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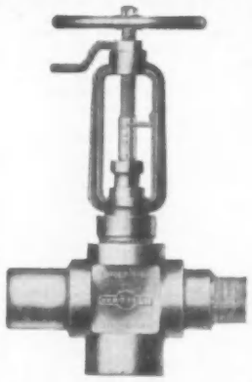
CONTROL CHOKES
That Meet Every Field Condition



Kerotest Control chokes provide the most efficient and economical method of throttling the flow on prorated wells as well as for controlling back pressures on sand producing wells. Indicator scale is extremely accurate showing fractional dimensions of opening orifice from "0" to full size.

They are available in the Female Tee Type with bolted bonnet and the Male Tee Type with screwed bonnet (see illustration above) which permits easy removal of bonnet for insertion of positive choke bushing.

In these Kerotest Forged Steel Control Chokes, you find such quality features as forged steel bodies and bonnets, cast steel yokes, heat-treated steel stems, bronze yoke bushing, hardened alloy steel orifice bushings and needle points —all assuring maximum pressure strength, long service and dependable accuracy.

Ask for copy of "Kerotest Forged Steel Products", Bulletin 115.

KEROTEST
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Contempt Fine Assessed In Tender Violation

Austin, Texas.—A fine of $200 has been assessed by the Third Court of Civil Appeals against Jack Cowley for alleged contempt.

The court found that Cowley had moved untendered oil in violation of an injunction issued by the 126th District Court in a case which was before the higher court on appeal.

Affidavits filed by the state showed movements of untendered oil on four separate days. A small fine was assessed because Cowley had quit the refining business and is now operating a truck.

P. & C. Committee Urges Voluntary Code Compliance

Washington, D. C.—Members of the Planning and Coordination Committee are studying the problems of the oil industry resulting from the Supreme Court's NRA decision, and will meet, possibly for the last time, June 14 to determine what can be done under present conditions to keep alive the basic principles of the petroleum code.

The committee met June 3 and adopted resolutions urging the industry to continue to observe hours and wages of labor now in effect and lawful fair practice rules and principles of the code as a voluntary matter. The various regional, state and other sub-committees were asked to continue ready to serve.

Following the meeting, Chairman J. D. Collett issued a statement explaining that "it was decided that in view of the uncertainty now existing as to the legislative programs of the administration and of the Congress no definite recommendations as to future plans was advisable.

"We urge that every effort be made to retain the advantages we have gained in the past two years and we ask the cooperation of every unit in the industry."

East Texas Bottom-Hole Pressure Lowest in History

Tyler.—Decline of four pounds in the weighted average bottom-hole pressure of the East Texas field took place in May, according to survey conducted at the close of the month by the East Texas Engineering Association. This decline lowers the average for the field to 1213 pounds, the lowest level attained todate.

Engineers reported no change in the average pressure when readings on 322 key wells were taken at the close of April, although some areas sustained sharp losses in pressure while the balance of the field held steady or gained sufficiently to maintain the weighted average figure. Reservoir pressure of the field has dropped 18 pounds since January 1, 1935, or an average of three and six-tenths pounds per month.

A.P.I. Will Not Sponsor World Petroleum Congress

New York.—The American Petroleum Institute has informed the Institution of Petroleum Technologists at London, England, that it cannot accept an invitation to sponsor a World Petroleum Congress in the United States in 1936.

The Institute's president, Axtell J. Byles, informed the Institution that the organization regretted the necessity for declining the invitation, adding that visitors from the British group and others of a similar nature would be assured cordial welcomes at Institute meetings.

The First World Petroleum Congress was held at London last year, and was attended by American technologists. Dr. R. P. Anderson, of the Institute staff, represented the American trade association.

Oil Legislation Opponents Investigate Texas Industry

Austin, Texas.—The Texas Senate last week began a probe of "hot" oil operations, and appointed a sub-committee of the general investigating committee to proceed with the investigation.

Senator Joe Hill of Henderson was named chairman of a sub-committee to conduct a "general investigation of the oil and gas industry in Texas." Serving on the committee with Hill will be Senators Tom DeBerry, Bogota; W. R. Poage, Waco; T. J. Holbrook, Galveston, and Wilbourne Collie of Eastland.

With the exception of Collie, the members of the committee formed a bloc which radically opposed all oil legislation passed at the last regular session of the legislature.

Texas Proration Hearing At Austin June 17

Austin, Texas.—A statewide proration hearing has been called by the Texas Railroad Commission for June 17 at Austin.

Evidence taken will be used as a basis for July allowables, and will cover both oil and gas.

This hearing will be supplemental to that held in Amarillo on June 14. It is expected that evidence presented at the Panhandle hearing will be confined principally to a discussion of methods of proration of gas in the Panhandle under the new gas conservation law.

New Lone Star Line to Take Cayuga-Long Lake Gas

Dallas, Texas.—Construction work is to be undertaken within 45 days by Lone Star Gas Company on a 114-mile 20-inch welded natural gas line to connect its North Texas trunk line system with the Cayuga field, Northwestern Anderson County, Central East Texas, and also make a second tie-in with the Long Lake field, situated in the southwest part of the latter county. The projected line will have a maximum capacity of about 125,000,000 cubic feet of gas daily, operating on well pressure, as gas wells in the Cayuga field average 1500 pounds rock pressure, while those in the Long Lake field register about 2100 pounds.

Authorization of the pipe line extension was made the past week by officials of Lone Star Gas Company as result of having obtained a 20-year gas purchasing contract on a sliding scale price basis from Tide Water Oil Company and Texas Seaboard Oil Company, discoverers and principal owners of leases on the Cayuga structure. Contracts also have been made with a number of small property owners in the field. Gas purchases will be taken ratably between property owners and wells as provided for in the recently enacted state natural gas law, which becomes effective October 1, 1935.

Initial work on the 20-inch transmission line is scheduled to start by August 1, and the program calls for its completion prior to November 15. The line will extend from Irving Junction, situated a short distance west of Dallas, taking a southeasterly course to cross the Trinity River at Trinidad, Henderson County, thence south parallel with the east bank of the river to the two fields. Irving is the southern terminal for the company's 16-inch line delivering gas from fields in Southern Oklahoma, and is also on the 16-inch, or the largest of the two lines linking Dallas and Fort Worth.

Lone Star Gas Company contracted for the gas purchase rights under Tide

Texas Pipe Line Tax Valuations Hearings Set

Austin, Texas.—Valuations of 40 Texas pipe line companies for the assessment of intangible assets taxes were announced last week by State Tax Commissioner R. B. Anderson.

The total valuation upon which the assessments will be based are $32,957,620 higher than those used in 1934, which were $64,999,980.

Nine of the companies were valued lower than last year, while the assessed value of the remaining 31 were higher.

Hearings will be held beginning June 17, at which the lines will be permitted to offer evidence to show that their assessments are not proper.

After the hearings have been held, the assessment against each line will be fixed.

The law taxing intangible assets of pipe line companies operating in Texas became effective last year, and is being contested in the courts.

In announcing the valuations Anderson pointed out that "After having a year's experience in determining the intangible valuations of oil pipe line companies, and feeling that one of the reasons for the intangible assets tax law is to require oil pipe line companies to pay taxes to the state and counties commensurate with those paid by other taxpayers, the tax board has determined what it feels to be a fair taxable valuation of the intangibles of these companies."

In an appended table the 1934 and 1935 valuations are compared. The date of hearing on each of the assessments is also indicated. These hearings will be held in Austin.

Texas Pipe Line Valuations and Hearing Dates

COMPANY	Hearing	1935	1934	Increase	Decrease
Adeloil	.....	.....	$10,000	.....	$10,000
Arkansas	June 17	$1,280,700	1,250,000	$30,700	.....
Arrow Refining	June 24	115,500	21,280	94,220	.....
Atlantic	June 17	8,434,000	6,620,200	1,813,800	.....
Atlas	June 17	1,036,800	464,570	572,230	.....
Cardinal	June 24	31,300	5,000	26,300	.....
Channel	June 24	930,500	250,000	680,500	.....
Continental	June 17	122,900	50,000	72,900	.....
Cosden	.....	.....	20,000	.....	20,000
Roy I. Davis	.....	.....	20,000	.....	20,000
Duval Pipe Line	June 24	39,300	3,280	36,020	.....
Empire	June 18	489,600	196,250	293,350	.....
Federal	June 24	270,000	25,000	245,000	.....
Gulf	June 18	2,333,800	3,356,940	.....	1,023,140
Humble	June 18	21,170,200	12,111,000	9,059,200	.....
Illinois	June 19	1,384,600	1,000,000	384,600	.....
International	June 24	20,300	20,000	300	.....
Longview Gathering	June 24	110,900	25,000	85,900	.....
Los Olmos	.....	.....	2,000	.....	2,000
Magnolia	June 19	14,322,100	5,958,340	8,363,760	.....
Pan-American	June 19	1,000,000	1,200,000	.....	200,000
Pasotex	June 20	843,400	12,000	831,400	.....
Pure	June 20	3,086,800	5,062,000	.....	1,976,800
Root	June 24	250,000	100,000	150,000	.....
Shell	June 20	6,365,100	5,478,180	886,920	.....
Sinclair Prairie	June 20	585,100	468,950	115,150	.....
Sinclair Prairie of Texas	June 20	10,116,500	4,419,840	5,696,660	.....
Standish Pipe Line	June 21	903,700	420,900	482,800	.....
Stanolind	June 19	3,000,000	587,330	2,412,670	.....
Sun	June 21	2,825,000	2,576,000	249,000	.....
Texas-Empire	June 21	4,019,000	3,357,000	662,000	.....
Texas	June 23	5,705,900	5,609,030	96,870	.....
Tidal	June 23	1,537,300	1,249,430	287,870	.....
F. W. Tong	June 24	7,300	1,900	5,400	.....
Toronto	June 23	341,000	200,000	141,000	.....
Williamson	June 24	28,700	7,500	21,200	.....
Yount-Lee	June 21	1,689,000	1,919,000	.....	230,000
Danciger	June 21	599,600	.....	599,600	.....
Eastern Texas	June 24	62,200	.....	62,200	.....
Panola	June 24	165,000	.....	165,000	.....
Reagan Crude Production	June 24	2,667,100	.....	2,667,100	.....
West Texas Refining	June 24	200,000	.....	200,000	.....
East Texas Refining	June 24	200,000	.....	200,000	.....
Houston Oil	June 24	500,000	.....	500,000	.....
Blanco Oil Sales	.....	.....	7,000	.....	7,000
Totals	.....	$97,957,600	$64,999,980	$32,957,620	.....

Water Oil Company and Texas Seaboard Oil Company's Monnig Brothers ranch, the discovery lease of the Long Lake field, last August, and began taking gas late in December through the extension of a 75-mile 12-inch line from the field to connect with its Central Texas system at Riesel, McLennan County. Construction work was completed the past week on 11 miles of 12-inch line, parallel to an existing eight-inch carrier, between Riesel and Waco. H. L. Hunt, only gas producer in the Long Lake field outside the discovery leasehold, contracted to sell gas to Lone Star Gas Company on a sliding scale price basis until December 31, 1944.

Negotiations have been underway for some months between Lone Star Gas Company and the owners of four high pressure gas wells completed and shut-in on the Buffalo structure, Leon County. These wells were drilled under a unit plan, with Shell Petroleum Corporation, owner of 50 percent interest, operating the properties. The Buffalo structure could be tapped by Lone Star Gas Company with a short extension from its Long Lake-Waco 12-inch carrier.

Unofficial estimates on the potential gas yield of the Cayuga, Long Lake and Buffalo structures, which produce from the Woodbine sand horizon at depth ranging 4000 to 6000 feet, places the trio almost in a class with the remaining output of the Texas Panhandle, the largest known gas reservoir. The above three fields yield sweet gas, having a high B. t. u. content, and are particularly attractive to a natural gas distributor by reason of these qualities, plus high pressure and promise of a minimum gas waste by the well owners in developing their properties.

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Gulf Will Build Line To Wildcat Producer

Fort Worth, Texas.—Gulf Pipe Line Company is preparing to build about 16 miles of six-inch line from its West Texas trunk line system near the Judkins-Connell field, along a northerly route to the Scharbauer-Goldsmith area, northwestern Ector County, where connection will be given recent wildcat oil producer completed by Gulf Production Company. Two major companies operating trunk lines near this new Ector County producing area turned down the opportunity to connect with and take the production from the two wells that have been completed. Although the oil tests 36 gravity, it has a high sulphur content.

Line pipe required for this proposed extension line will be acquired by pulling an inactive six-inch trunk line formerly operated by Gulf Pipe Line Company between Wortham and Lufkin. It was connected with threaded couplings, and will not be welded when placed into service in West Texas.

Phillips Plans Panhandle Gas Line

Pampa, Texas.—Construction of about 30 miles of 24-inch welded line is reported to be contemplated by Independent Natural Gas Company, natural gas transportation unit of the Phillips Petroleum Company, in connecting sour gas production in northeastern Moore County with natural gasoline and carbon black plants near Sanford, Hutchinson County. The latter plants will be barred from using sweet gas production heretofore utilized when the Texas new natural gas law becomes effective on October 1, 1935.

Phillips Petroleum Company holds leases on a large block of proved gas producing acreage in northeastern Moore County, and the proposed line will likely terminate near the company's two shut in wells on the J. C. Wilson tract, Section 157, Block 3-T, T&NO Ry. Survey.

South Burbank Operators Agree On Plan For Unit Operation

FLOYD SWINDELL
Staff Representative

ANNOUNCEMENT was made on June 4, of the successful conclusion of efforts to utilize the South Burbank pool of southwestern Osage County, Oklahoma. In addition to several features unique to unit organization the plan is unusual in that it was worked out and adopted within a period of six months despite the usual handicaps. Present condition of the field is such that it offers the opportunity for one of the most interesting trials of cooperative action yet tried in the petroleum industry.

The South Burbank pool was discovered on December 28, 1933, when Mead Brothers, Elfred Beck and Bridgeport Machine Company completed L. De Noya 1, NE NE SW 10-25n-6e, flowing 907 barrels initially of high gravity high lubricating quality crude from Burbank sand at 2807 to 2838 feet. Geology of the area was worked by and the test promoted by Elfred Beck who was chief geologist for Producers and Refiners Corporation for nine years. Subsequent development outlined an accumulation of major importance which proved attractive to major and independent concerns alike. The area originally had been played principally by smaller companies and individuals but subsequent auctions of oil and gas leases by the Osage Tribe at Pawhuska brought several of the outstanding majors into the picture as spirited bidding and high prices marked all offerings in the area.

Through regulations suggested by the operators and approved by the petroleum administrator development has been carried out in an orderly manner as evidenced by the fact that only 105 of the possible 250 10-acre locations have been drilled. A majority of these are inside locations which would result in large wells. The pool also is one of the few in Oklahoma where operators have been able to agree to such an extent that its production could be prorated voluntarily. The 75 Burbank sand wells and two Mississippi chat wells had produced approximately 4,000,000 barrels as of June 1, 1935. Allowable for the pool had not exceeded 11,170 barrels per day nor 200 barrels per well per day, which is a relatively small percentage of the actual capacity to produce. All of the wells are tubed at the time of completion and all production must be taken through tubing. As a result of this practice the structure has shown only a very small pressure decline.

Records from 60 wells show a range of from 50 to 5500 barrels initially and an average of 1656 barrels per well from a penetration ranging from 20 to 92 feet and averaging 58 feet. A few wells, principally those near the edge of the structure, are making small amounts of water but no water problem has developed and the oil-water contact seems uniform as it should be at the rate and method of withdrawal of oil and gas. From a practical standpoint it may be said, therefore, that the unit plan is getting under way in an almost virgin area despite the fact that the pool is more than 17 months old and its productive limits are fairly well defined. Conservative estimates place ultimate recovery at 25,000,000 barrels but it is not believed extravagant to expect an additional 5,000,000 barrels with the efficiency of operation made possible by the plan.

Organization

As the first step in putting the plan into operation, each participant appointed a representative to act on the advisory committee which in turn selected Carter Oil Company, originator of the plan, as the operator of the unit which now includes 2400 acres of the estimated possible 2680 productive acres on the structure. Although June 1, 1935 had been set as the deadline for signing the agreement, the date was extended one week and other acreage may come into the block. The advisory committee includes J. J. Conry, Carter Oil Company, chairman; J. B. Steele, Kewanee Oil & Gas Company and Enterprise Transit Company, vice chairman; J. T. Robinson, Carter Oil Company, secretary; and 13 additional members whose names are not yet available.

A consulting committee composed of J. B. Steele, chairman; C. C. Toomey, Mid-Co Oil Corporation; H. M. Stalcup, Skelly Oil Company; George Manahan, Manahan Oil Company, and Don R. Knowlton, Phillips Petroleum Company, was appointed to facilitate arrangements for turning operation of the properties to the operator of the unit and to work out preliminary plans for future development and production practices. Albec Oil Company, Bay Oil Corporation, Bridgeport Machine Company, Carter Oil Company, Empire Oil & Refining Company, Gypsy Oil Company, Indian Territory Illuminating Oil Company, J. E. Mabee, Manahan Oil Company, Mid-Co Oil Corporation, Norbla Oil Company, Phillips Petroleum Company, Skelly Oil Company, H. P. Taubman and Enterprise Transit Company are the participants.

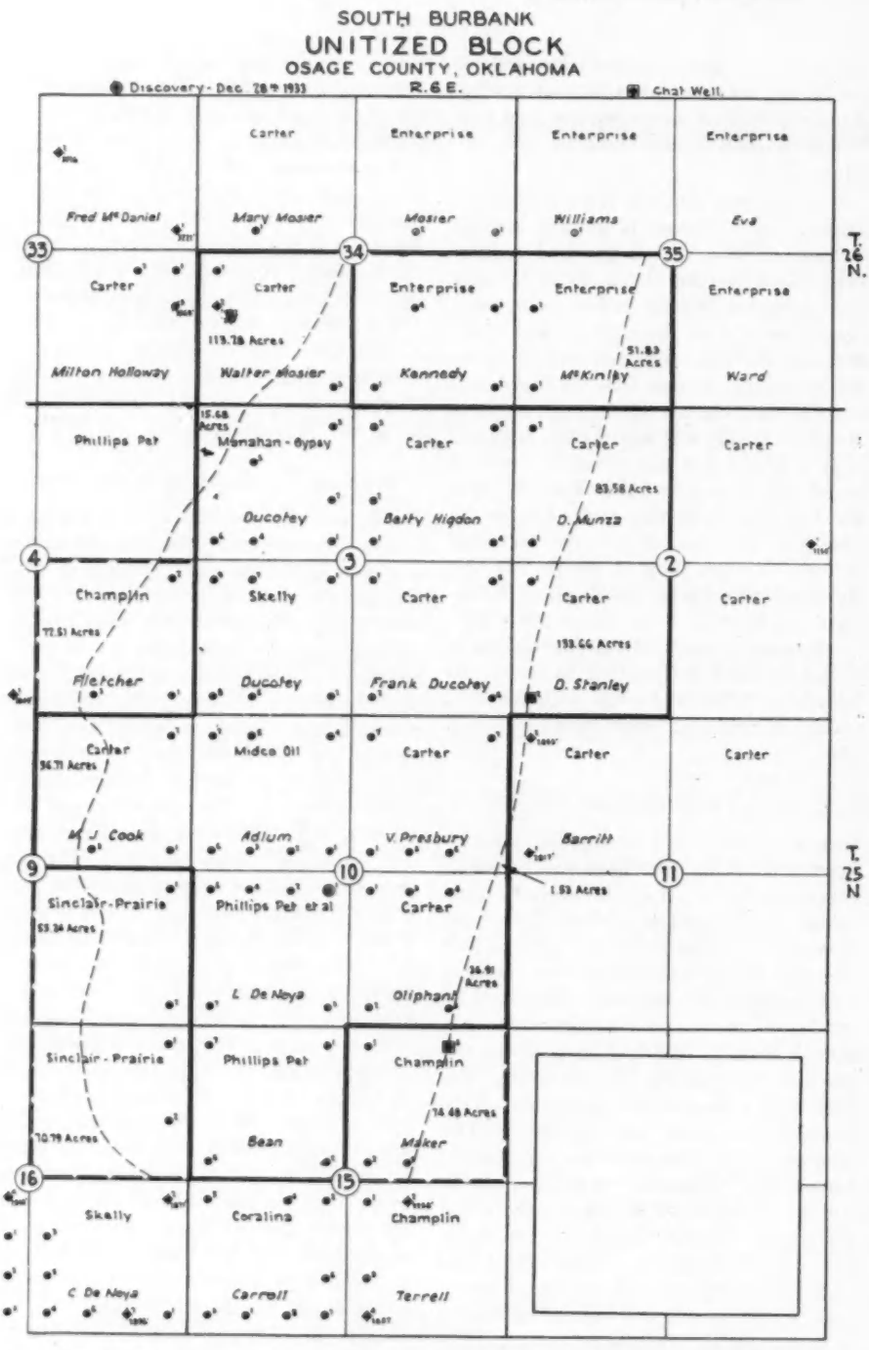
Basis of Participation in the Unit

The difficult problem of arriving at a method of evaluation which would be acceptable as a basis for determining participation of each of the lease owners, was solved only after several months of discussion and the submission of a large number of ideas. The old Burbank pool was discovered in May, 1920, when production was found in what was later named the Burbank sand, a probable equivalent of the Bartlesville sand. Average penetration of the producing zone was 60 feet, although not all of this was sand and not all of it was saturated. The upper portion of the producing section was principally a gas sand and it was general practice to let the wells "drill themselves in". As a result of this practice and the subsequent wastage of gas, formation pressures were rapidly dissipated and the field had a relatively short flowing life. It was not uncommon to find as much as 20 inches of vacuum being pulled on a well or lease and in the light of present knowledge practically everything was done to insure by-passing of gas and entrapment of large quantities of oil. Despite the practices, which were considered good in that day, the field has yielded to June 1, 1935, approximately 186,150,000 barrels of oil from 22,200 productive acres, an average of 8385 barrels per acre. Under the conditions it seems conservative to state that probably not over 18 percent of the oil originally in the structure had been recovered after 15 years.

Since its production is from the same

sand only a few miles away and the penetrations were within a foot or two of the same average, it seemed more logical to apply the production experience of the old pool than to adopt some method which might rest primarily on theory and which undoubtedly would have brought about further disagreement among the prospective participants. From a study of production in the older pool a determination was made of recovery per acre to date from wells which had the same initial production. This was done by 500-barrel steps from zero to 5500 barrels initial production for all wells and the recovery per acre from each 500 barrel class determined. From this information a curve was developed. Engineers with the various prospective participants disagreed as to the slope and position of the curve but when all of the opinions were averaged they were found to fall roughly on the original curve which happened to be a square root curve. Wells in the new South Burbank pool then were classified similarly as to initial production and the ultimate recovery for each class read from the curve. From the data thus obtained the areas of like recovery were each enclosed in a contour line and each given an identifying color. By measuring the area of each color for each lease the amount of expected recoverable oil for each owner could be determined. Taking the unit as 100 percent of the total recoverable oil, the percentage of each participant in the unit as a whole was determined by the relationship of his recoverable oil to the total recoverable oil. In the original proposition it was planned to run the unit under this plan until January 1, 1936, when a general readjustment of percentages of participation was to be made. When each of those interested had checked the percentages and no disagreement was voiced, it was decided to make a permanent adoption of the percentages. These may be changed only by the addition of acreage to the unit block and such additions are not anticipated after passage of the extended dead line.

Under the plan the participant surrenders only operation of his property to the unit management. Each retains a call on his proportionate share of the oil which may be sold to anyone with whom he desires to make an agreement. All transactions, including collections from the sale of oil, will be handled through Carter Oil Company as the operator. Monthly statements will be rendered showing the allocation of development and operating expense along with the share of each participant in the income.



Acreage shown inside of the heavy solid lines is that which is included in the unit block. That shown inside the heavy dashed lines was considered for inclusion but the operators did not agree to the plan. The light dashed line shows the estimated limits of production. Acreage figures shown on the edge tracts indicate the expected amount of non-productive acreage in each of these 160-acre tracts. Acreage south of the north half of Section 13 and the northeast quarter of Section 16-25n-6e, is considered to be in the old Little Chief pool which lies to the south and which was developed prior to South Burbank. It is, however, apparently on the same structure.

Plan of Future Operations

The operating committees are working on plans for future operations but since many of the methods which eventually will be applied to promote efficiency and conservation are still in the formative stage, no details are being released at this time. One of the first steps will be the recompression of and return of the gas to the producing formation. Since the pool has yielded less than 25 percent of what it is expected to yield ultimately and since the structure as a whole has shown very little pressure decline, the return of the unused gas to the formation amounts practically to initial repressuring. All pressure for injection of the gas will be supplied by a centrally located high pressure plant. Bottom-hole or formation pressure readings will be taken regularly to determine pressure drop in relation to

production rate and pressure balance in the structure as a whole.

The primary purpose of the unit plan is the conservation of gas energy, thereby increasing ultimate recovery, reducing lifting costs and maintaining the high quality of the oil. Other advantages are the elimination of duplicity in operations and the drilling of a lesser number of wells because they may be located in positions most advantageous from the standpoint of maximum recovery rather than the following of a definite well spacing plan. It has been shown that a possible 145 undrilled 10-acre locations remain inside the estimated recovery area. Under the unit plan it appears likely that not more than 60 additional wells will be required to drain the structure efficiently. This saving of 85 wells at $23,000 each would in effect amount to approximately $2,000,000. The sand of the old Burbank pool has yielded to date 8385 barrels per acre. Under the more efficient methods which will be applied to the new pool it is conservatively estimated that a 20 percent increase in ultimate recovery will be effected. This, at one dollar per barrel, would represent an increase of approximately $4,500,000 in expected income. With the formation pressure being maintained through repressuring, it is expected that fully 80 percent of the recoverable oil will be flowed to the surface at an average cost not in excess of 10 cents per barrel. Assuming that this amount of oil may be flowed to the surface it seems logical that lifting costs throughout the life of the pool should not exceed 15 cents per barrel compared to approximately 30 cents per barrel during the life of the old Burbank pool. This indicates a possible saving of $3,750,000 in lifting costs, assuming an ultimate recovery of 25,000,000 barrels. These figures are believed ultra-conservative and the actual results should be even more impressive. Considering these points alone the unit should have an advantage of at least $10,000,000 over the results which would obtain under individual development and operation. One of the distinct advantages of the unitization of pools in Osage County is the fact that the royalty is owned in common by the Tribe.

Oklahoma Completions

Company, Well and Location	Init. Prod. Bbls	Depth
COMANCHE COUNTY—		
Heiden & Taylor, Crutcher 1-A, cwl e½ ne 11-1n-20w	*	868
CREEK COUNTY—		
Hancock & Thomas, Williams 1-A, sw sw se se 24-17n-8e	*	2774
HUGHES COUNTY—		
Sinclair Prairie, Coppadge 1, se se nw 16-7n-8e	72	2998
Amerada & Stanolind, Adams 1-A, ne ne sw 31-9n-9e (pb 4095)	52	4317
JACKSON COUNTY—		
Gypsy, Kelly 2, sw ne ne 10-1n-20w	88	1479
KIOWA COUNTY—		
Henson & Patton, Beeler 1, ne ne ne 11-6n-15w	*	517
LINCOLN COUNTY—		
Stanolind et al, Campbell 1, sw sw nw 3-14n-3e	*	5139
LOGAN COUNTY—		
J. E. Shaffer et al, Hammond 1, se se sw 10-15n-4w	*	7102
McCURTAIN COUNTY—		
Schrivner et al, Central Life Ins. 1, ne sw sw 34-6s-21e	*	998
MUSKOGEE COUNTY—		
Mussellum, Louis 2-A, se se se ne 17-14n-17e	20	1903
Conrad Lambert, Hawkins 1-A, nw sw se 31-16n-15e	*	1794
NOBLE COUNTY—		
Magnolia, Biets 1, csw sw 27-20n-2w (pb 5098)	210	5155
Stanolind et al, Frederick 2, cne se 28-20n-2w	6380	4982
Shell, Tate 1-A, cnw nw 29-20n-2w	*	5415
OKFUSKEE COUNTY—		
Eagle Picher, Barnett 9, nw ne ne sw 25-11n-11e (pb 3390)	¶2	3400
OKLAHOMA COUNTY—		
Anderson & Kerr, Karp 1, se ne se ne 22-11n-3w (pb 6284)	*	6583
OKMULGEE COUNTY—		
Hazlett, Dunbar 3, nw ne nw nw 31-14n-13e	15	1970
Crewes & Armstrong, Beams 4, ne se se 4-15n-14e	*	1665
OSAGE COUNTY—		
Higgins, 16, nw ne sw se 25-23n-8e (pb 2165)	20	2187
Lewis Prod. Co., Mullendore B 7, sw ne nw 21-24n-7e	450	2723
Western American Oil Co., 21, se nw nw sw 4-24n-10e (otd 1439)	15	2047
PONTOTOC COUNTY—		
Moore et al, Craddock 6, se nw sw 29-2n-7e	8952	4173
Moore et al, Harper 1, sw sw ne 29-2n-7e	¶30	1800
Moore et al, Wirick 2, ne se sw 29-2n-7e (otd 4042)	3256	4140
B. F. Williams, Brown 2, se sw ne 27-5n-6e	spd. &	abd.
Sunray Oil Co., Gilmore 12, ne sw se 21-5n-8e	¶4	959
Delaney et al, Gilmore 5, se ne ne ne 29-5n-8e	30	874
POTTAWATOMIE COUNTY—		
Westgate Oil Co., Schrader 4, se nw ne 6-6n-5e (pb 4176)	50	4209
Mid-Continent Crude Oil Co., Atwater 1, ne se se 9-7n-4e (otd 3800) (pb 4221)	480	4225
Straughn et al, Toller 1-A, ne sw nw 19-7n-4e	lcn.	abd.
Turman Oil Co., Hubbard 2, nw sw nw 29-8n-4e	252	4345
Carter et al, Conrad 3, cn½ se sw 35-11n-6e	678	4124
SEMINOLE COUNTY—		
Gypsy, Grayson 2, nw sw nw 13-6n-5e	960	3813
Champlin Ref. Co., See 6, se se ne se 30-7n-8e (pb 3044)	50	3096
Magnolia, Reed 8, se se sw se 30-7n-8e	2140	4261
Carter, Gypsy et al, Renton 2, cs½ ne nw 2-10n-6e	432	4143
Magnolia, Browning 1, ce½ se nw 14-10n-6e	833	4145
Carter et al, Harris 1, cw½ sw se 18-10n-6e	165	4584
STEPHENS COUNTY—		
Paul Trahan, 1, nw nw sw 12-2s-7w	lcn.	abd
McAllister Drlg. Co., Leach 1-A, se se se nw 11-2s-8w (otd 1775)	*	2155
WAGONER COUNTY—		
Sands Pet. Co., Flanley 2, sw sw sw sw 4-17n-15e	*	1285

*Failures; †Junked; ¶Million cu. ft. gas.

Oklahoma Development Routine During Week

Tulsa.—Pontotoc County still had no close competitor from the new work angle as it again led the state with 10 first reports, nine of which were in the Fitts pool. Creek County assumed second position with six firsts; Oklahoma, Osage and Seminole Counties had five each; Okmulgee County, four; Logan and Stephens Counties, three each; Atoka, Carter, Marshall and Noble Counties, two each, and Coal, LeFlore, Muskogee and Pawnee Counties, one each, a total of 53 first reports from 16 counties compared to 65 during the preceding week.

Of the 41 completions, 23 were oil wells which added 25,600 barrels to the cumulative initial production of the state, three were dry gas wells with combined initial volume of 36,000,000 cubic feet, two were abandoned locations, one was a test spudded and abandoned and 2 were dry holes. Four old wells drilled deeper 1511 feet, one 52-barrel wildcat discovery at 4317 feet, five wildcat dry holes with combined footage of 14,624 feet and 31 other completions which added 90,839 feet, brought drilling footage to 111,291 feet or an average of 2929 feet per completion.

Three Deep Tests Underway In Coal-Atoka Area

Atoka, Okla.—Importance of structures lying to the east of the Franks Graben in the southwestern portion of the McAlester Basin in Coal and Atoka Counties, has been stressed by several leading geologists for some time. Ramsey Petroleum Corporation of Oklahoma City was the first to go into the area on a large scale when it took a block of several thousand acres in the Centrahoma area of western Coal County. Subsequently Carter Oil Company took a half interest in this block for the drilling of at least one 7,000-foot test and two if necessary to test the structure. Stanolind Oil & Gas Company and Amerada Petroleum Corporation more recently bought an eighth interest and J. E. Mabee an eighth interest in the same block. Three weeks ago announcement was made by the community for Thompson 1, C S½ NE NE 34-2n-9e, near the town of Centrahoma and practically at the highest point on the structure.

Within another week Stanolind Oil & Gas Company, Amerada Petroleum Corporation et al announced location for Travelers Insurance Company 1, SW NW SE 28-1s-9e, near the town of Olney in southern Coal County and 10 miles south of Carter et al's Thomp-

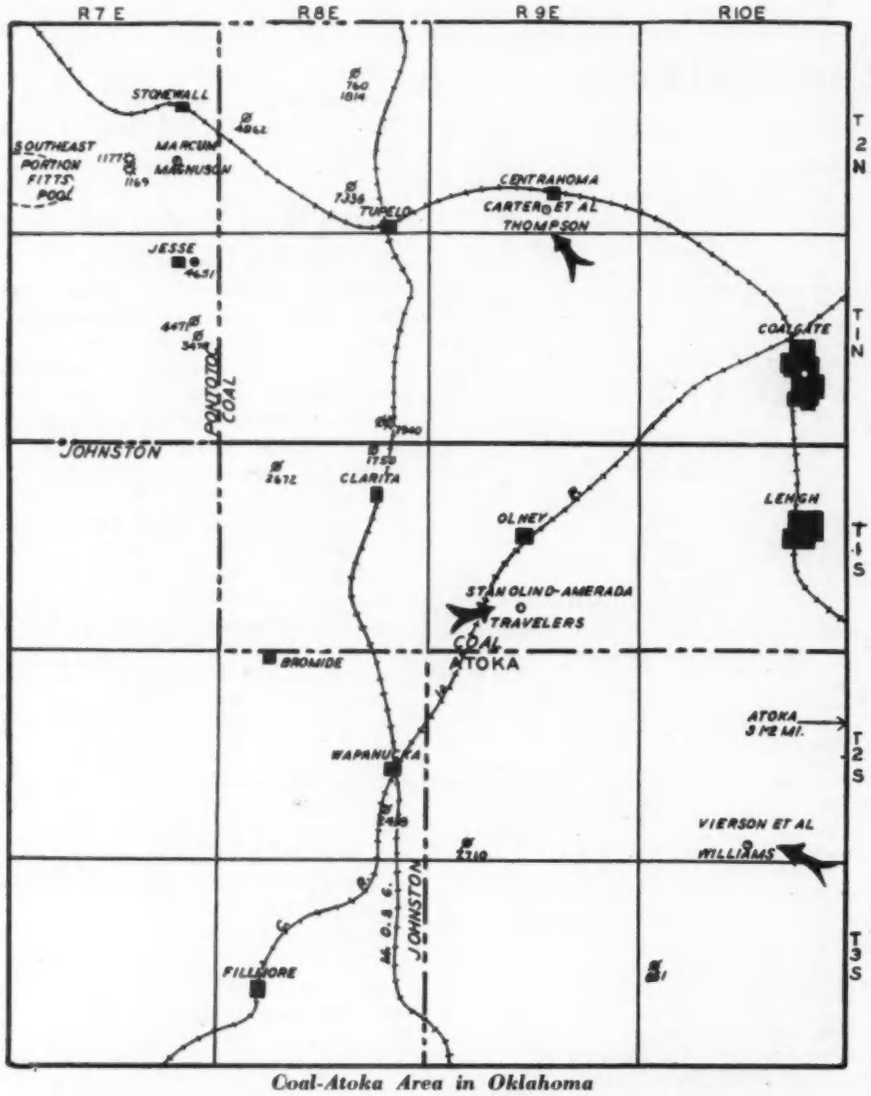
son 1. This test is near the center of a block of 1000 acres acquired principally from W. D. Grisso et al. Acreage previously acquired by the operating companies increased the block to sizeable proportions to cover a large seismograph "high."

The third exploratory test of special interest was announced last week by Ralph Vierson et al at Williams 1, SW SW NW 24-2s-10e, near the town of Boggy Depot in northwestern Atoka County and 10 miles to the southeast of Stanolind-Amerada et al's Travelers Insurance 1. All are to be deep tests.

Several large structures have been known in the area for 30 years but attention of the industry was not generally attracted until discovery of oil in large quantities in the Fitts pool of southeastern Pontotoc County. Among the pronounced structures which have been known for many years are the Salt Flat Anticline trending north of east and south of west through southwestern Pittsburg County and northeastern Coal County and the Coalgate Anticline, roughly paralleling the Salt Flat Anticline through eastern Coal County.

Arbuckle Lime Showing In Old Billings Field

Billings, Okla.—Midco Oil Corporation's Yost 1-A, NE NW NE 22-23n-2w, in the old Billings pool of northwestern Noble County, was being watched after it had encountered a showing of oil in what is correlated as Arbuckle lime at 4243 to 4257 feet. The formation softened up at this point and was cored with no recovery. A core at 4168 to 4243 feet had shown sandy dolomite. Seven-inch casing was being cemented at 4168 feet to test. The pool, which was discovered by Midco in February, 1917, has not heretofore produced from formations lower than the Onkawa series of Pennsylvania age.



Coal-Atoka Area in Oklahoma

Two North Oklahoma County Tests Watched

Guthrie, Okla.—Two wildcat tests of northwestern Oklahoma County were being closely watched as they neared objective horizons. Slick-Urschel Oil Company's Owen Community 1, SE SE SE 19-13n-3w, 1½ miles northwest of the town of Britton, had first Wilcox sand at 6675 to 6695 feet and was drilling below 6720 feet in dolomite, expecting second Wilcox sand momentarily.

Two miles southeast of production in the Edmond pool, Sinclair Prairie Oil Company's Corbett 1, NE NW NE 17-13n-3w, was drilling below 5948 feet and expecting Oswego lime. Checkerboard lime had been topped at 5380 feet. Both tests are on seismograph "highs" with good sub-surface control and on the Nemaha Ridge trend.

To the north in southwestern Logan County, Sinclair Prairie Company et al's Koatsch 1, SW SW SW 23-15n-3w, was deepened to 6343 feet where approximately 2000 feet of water entered the hole. It was plugged back to 6332 feet and waiting on the plug to set.

New Hughes County Field

Holdenville, Okla.—The Texas Company appeared to have discovered a new pool in north central Hughes County, 10½ miles northeast of here, when its Keeton 1, NW NW SW 4-8n-10e, cored Simpson dolomite from 4025 to 4032 feet, recovering 38 inches of dolomite the last foot of which was well saturated. The Texas Company has seven sections of leases on this seismograph "high."

Coal County

Centrahoma, Okla.—Carter Oil Company et al's John Thompson 1, C SL NE NW 34-2n-9e, on the Centrahoma "high" near here in western Coal County, was spudded on the morning of June 7, using a Diesel-electric rotary Rig. Loffland Bros. have the contract.

Carter County

Ardmore, Okla.—Carter Oil Company's Humble-Williams 1, SW NE SW 27-2s-3w, in the old Fox field of northwestern Carter County, was drilling below 6138 feet in Viola lime. Tops are not being released on this test but it now has had over 300 feet of Viola lime. It probably will be carried to 10,000 feet or better to test the Simpson section.

Huge Wildcat Gas Well Found South Oklahoma City

Oklahoma City.—The big field news of the week in Oklahoma came from Sinclair Prairie Oil Company et al's Franklin Community 1, SE NW SE 21-10n-2w, 3¾ miles east of the town of Moore and 4½ miles southeast of the Oklahoma City pool, in northern Cleveland County. On Friday, June 7, the test was bailed down 1000 feet, cleaned itself in 10 minutes and was estimated making from 125,000,000 to 150,000,000 cubic feet of wet gas from Wilcox sand topped at 7245 feet and penetrated to 7291 feet. It first attracted attention several weeks ago when it cored a showing of oil in Simpson dense at 7100 to 7114 feet. Interest subsided when a salty core was pulled from 7051 to 7062 feet. Second Wilcox sand was cored from 7268 to 7291 feet and seven-inch casing cemented at 7268 feet. The well is on a 1320-acre block owned by Sinclair Prairie Oil Company, Mid-Continent Petroleum Corporation, Gypsy Oil Company, Wirt Franklin Petroleum Corporation, Cromwell-Franklin Oil Company, Twin State Oil Company, Carter Oil Company, Continental Oil Company, Empire Oil & Refining Company, Papoose Oil Company, Standard Oil Company of Kansas and Phillips Petroleum Company. The block includes all Section 21, SW and S½ NW of 22, NW NW and S½ NW of 27 and N½ of 28 all in 10n-2w. It is approximately 500 feet structurally higher than Prairie Oil & Gas Company's dry hole in C NE NE 8-10n-2w, three miles to the northwest along the strike toward the Oklahoma City pool but approximately 800 feet lower than the south end of the Oklahoma City pool. Two minutes after it was shut in it had built up a casing head pressure of 2750 pounds.

Kansas Completions

Company, Well and Location	Init. Prod. Bbls	Depth
BARTON COUNTY—		
C. B. Davis et al, Stekol 1, sw se se 1-20s-11w	1297	3285
BUTLER COUNTY—		
Sitran Brothers, Anderson 1-A, se ne se 9-27s-4e	15	2005
Aiken & Bennett, Loomis 1, sw ne ne se 16-27s-4e	25	2483
Bar-Key Pet. Co., Rierson 2, sw sw ne sw 21-28s-4e	100	1751
COFFEY COUNTY—		
Hinze et al, Vanocker 3, ne se nw ne 12-23s-14e	15	1550
ELK COUNTY—		
Griffin & Bell, Sigler 2, ce½ se se 25-30s-10e	42	1313
Haddox et al, Fleak 6, nw sw se 21-30s-11e	*	1440
ELLSWORTH COUNTY—		
Empire Oil & Ref. Co., Rolfs 3, ne se ne 14-17s-9w	1336	3193
McPHERSON COUNTY—		
Shell Pet. Corp., Decker 9, sw sw ne 11-19s-2w	345	3376
Shell Pet. Corp., Hull 4, ne ne sw 11-19s-2w	532	3368
RENO COUNTY—		
Sinclair Prairie Oil Co., Base 6, nw nw se 26-23s-4w	164	3594
Dickey Oil Co., & I. T. I. O. Baughman 3, cnw ne 3-24s-4w	646	3365
RICE COUNTY—		
Shell Pet. Corp. et al, Ploog 4, sw ne ne sw 33-18s-9w	1249	3230
Empire Oil & Ref. Co., Tournear 2, sw se ne 29-19s-9w	1376	3220
Empire Oil & Gas Co., Heckel 9, sw ne sw 18-20s-9w	372	3333
Gypsy Oil Co., Malone 2, nw sw ne 18-20s-9w	361	3340
SEDGWICK COUNTY—		
Western Kansas Oil & Ref. Co., Belzen 1, nw se se ne 17-26s-3w	*	4270
STAFFORD COUNTY—		
Stanolind O&G Co., Allen 6, se ne sw 31-22s-11w	667	3573
SUMNER COUNTY—		
Champlin Ref. Co., Latta "B" 2, se sw nw 9-30s-2w (otd 3079)	179	3175
WOODSON COUNTY—		
Theta Oil Co., McClaskey 11, ce½ se ne 31-23s-14e	22	1687
Foster & Schultz, Ferguson 1, csl ne sw 12-26s-13e	*	1540

*Failures; †Junked; ¶Million cu. ft. gas.

Otis Field

LaCrose, Kansas.— Schermerhorn Oil Company's Schroeder 1, NE NE NE 36-18s-16w, in the Otis area of eastern Rush County, was drilling below 3598 feet in La Motte sand and making an estimated 15,000,000 cubic feet of gas with a spray of oil. The Otis field is primarily a gas field, but several oil producers have been found on its flanks.

Ninety Percent Kansas Completions Oil Wells

Wichita, Kan.—Continued high water in several portions of the state held Kansas operators back but reports of the week indicated a pick-up of almost 100 percent in new work as scouts made 34 first reports from 15 counties. Rice County had the lead with six first reports; Ellsworth, McPherson and Russell Counties each had four; Greenwood County, three; Cowley, Elk, and Sedgwick Counties, two each, and Chautauqua, Ellis, Graham, Harper, Harvey, Reno, and Rush Counties, one each.

Although the number of completions did not show a material increase and initial production was only slightly increased the week was considerably more successful than its immediate predecessor. Of the 20 completions 18 were oil wells with a total rating of 8743 barrels initially and two were dry holes. Included in the 55,012 feet of drilling were one old well deepened 96 feet and two wildcat dry holes which involved 5810 feet of drilling.

Ten Important West Kansas Wildcats Started

Wichita Kansas. — Ten important wildcat tests were announced in western Kansas during the week which otherwise was a routine period with no outstanding completions. Among the more important of these were El Dorado Refining Company's Marshall 1, C SE SE 8-7s-17w, three miles northeast of the town of Stockton, northeastern Rooks County; Helmrich and Payne's Kuhn 1, NW SW NE 16-14s-20w, eight miles south of Ellis in southwestern Ellis County; Aylward et al's Dreiling 1, SE SE SE 3-14s-16w, one half mile south of the town of Walker and three and one half miles west of production in the Gorham pool of western Russell County; Stearns and Streeter's Dreiling 1, SW SW SW 8-13s-15w, midway between the South Fairport and Gorham pools also in western Russell County; Hartman and Blair's Mills 1, SE SE SW 27-13s-15w, midway between the Gorham and Dillner pools and one and one half miles northwest of their Roubach 1, which is the largest well in Kansas with an initial of 4076 barrels; and Nassau Petroleum Company's Karst 1, NW SW NE 27-15s-14w, one mile southwest of the Ochs pool in southwestern Russell County.

Edmond Operators Not To Use Less Than 10 Acres

Oklahoma City.—The Oklahoma Corporation Commission made its first decision under a well spacing law passed by the fifteenth session of the Legislature when it ruled that wells in the Edmond pool of northwestern Oklahoma County must not be drilled on tracts of less than 10 acres. Exception was made in the case of Gulf Production Company of Oklahoma's Lindsay 1, NE SW NW 6-13n-3w, in the center of a 2½-acre tract. This is the Edmond mystery well for which the commission has ordered a potential gauge after operators refused to yield information concerning its rating. The new law specifies that wells may not be drilled on tracts of less than 10 acres except by agreement of 80 percent or more of the operators owning 80 percent or more of the acreage.

Importations Are Charged With Being Serious Menace

(*Continued from page 11*)

sion, the total of these importations, exclusive of products brought into this country under bond and for reexport, was 5,257,127 barrels. The amount of authorized imports under the agreement previously mentioned was 3,348,000 barrels.

"When nearly 2,000,000 barrels of 'hot oil' displace that quantity of domestic oil in the seaboard markets of the country it becomes increasingly difficult for the American petroleum industry to continue its recovery."

A large proportion of the March imports—2,287,968 barrels—was fuel oil for supplies of vessels, which is exempt from the duty of one half-cent per barrel imposed upon other fuel oil imports, it was explained. The amendment to the revenue act removing the duty from vessel supplies, Mr. Howsley declared, was adopted "without full realization of its import" and takes away one of the most important markets of the domestic producer.

"The increase in imported foreign petroleum and its products may indicate the reason why some of the larger companies in the petroleum industry are bitterly opposed to the adoption of the federal petroleum bill," he said. "That bill provides that the imports shall be 4.5 percent of the demand in this country and for export. The imports during March were far in excess of that amount. The importers are today bringing into the country 50 percent more of foreign petroleum and its products than they would be allowed to bring in if that bill were in effect.

"By countenancing or at least permitting the excessive importation of foreign oil we are, in effect, granting a subsidy of millions of dollars to the importers. This is especially true of those who are importing fuel oil for supplies to vessels. Their freedom from the excise tax grants them an improper advantage over producers of domestic fuel oil. This subsidy naturally increases the burden which must be borne by business and by industry and, if we should analyze the situation sufficiently far, might be found to be one of the many factors which prevent a more rapid decrease in our unemployment figures.

"In defense of the oil-producing states and of the oil industry, which is such an important factor in the industrial life of those states, notably of my own state of Texas, some action should be taken at this session of Congress to stop this unfair competition of a cheap foreign product with our domestic oil. A definite limitation on imports should be established. Once established, it should be enforced. Penalties should be imposed upon those guilty of violation. It should be driven home to the handful of wealthy corporations which are now importing this oil that if it is criminal to produce hot oil from our domestic fields, it is equally criminal to import oil in excess of the restrictions on importations."

To Recomplete Fitts Southwest Extension Well

Oklahoma City.—W. A. Delaney et al have decided to pull the tubing for removal of an obstruction at approximately 3400 feet in their Smith 1, NE SE SE 26-2n-6e, southwest extension well in the Fitts pool. Early in May this test took its potential gauge yielding 490 barrels the first hour through 2½-inch tubing. Representatives of the offset operators refused to approve the gauge on the contention that this size of tubing could not handle 490 barrels in an hour at the indicated formation pressure of 1804 pounds. It was contended that tubing was split and the flow coming through casing and tubing whereas regulations call for the taking of potentials through the tubing alone. On a flow of a few minutes duration through the casing on Friday, June 7, a large well was indicated.

Plan to Hold Geological Meeting in Mexico City

San Antonio, Texas.—Tentative plans have been made for the holding of the annual convention of the San Antonio Geological Society during the autumn in Mexico City, Mexico. Negotiations have been under way some time with oil company representatives and political officials in Mexico City, which it is expected will result in the holding of the meeting there sometime in September.

It is not definitely known whether the geological papers to be presented will include discussion of the reserve situation in Mexico and Central American countries, but efforts will be made to arrange for them to be presented.

A drive is being conducted by the San Antonio Geological Society at this time in an effort to bring its membership to at least 150. This will enable the organization to have two delegates to the American Association of Petroleum Geologists, instead of one at present.

As a result of this, the following new members have been added: Dunbar Fisher, Humble Oil & Refining Company; J. Elmer Thomas, Milam Building; J. M. Hansell, Sun Oil Company, Milam Building; Ira H. Stein, Continental Oil Company; Wm. F. Curry, Shell Petroleum; W. L. Day, Holland Oil Company, Alamo National Building, all of San Antonio, Texas; C. E. Buck, Humble Oil & Refining Company; Carl B. Richardson, Humble Oil & Refining Company, both of Corpus Christi, Texas; Arthur H. Petsch, Ohio Mexico Oil Corporation; J. S. Leanard, Ohio-Mexico Oil Corporation, both of Laredo, Texas; Phillip D. Gully, Box 1024; Edwin F. Ustynik; David M. Miller, United Gas Company, all of Beeville, Texas.

The Membership Committee of the San Antonio Geological Society is as follows: Harry H. Nowlan, chairman, Darby Petroleum Corporation, San Antonio, Texas; Jack Trenchard, Whisenant & Trenchard, San Antonio, Texas; Charles Stewart, United Production Corporation, Beeville, Texas; J. O. Nelson, San Antonio, Texas; Olan Bell, Humble Oil & Refining Company, Laredo, Texas; Guy Gierhart, Humble Oil & Refining Company, Corpus Christi, Texas.

Three New East Texas Wildcats Start

Tyler, Texas.—Operations were launched the past week on three wildcats in the north portion of the Woodbine sand belt in East Texas, including two near Emory, Rains County. J. E. Farrell & Company, Fort Worth, was preparing to spud a projected Woodbine sand test on the G. K. Ayres tract, Chas. H. Simms Survey, situated in southwestern Franklin County and along a popular trend extending northeast from the Van field.

The two Rains County tests are to be drilled on adjoining blocks, aggregating about 20,000 acres, by Harry B. Baker, Geo. McClung, Allen and others, all of Fort Worth. Derricks have been erected. One test will be on the Ida Bullar 75-acre tract, Nancy Brantley Survey, about two miles southwest of Emory, while the other is on the A. Giles 105-acre tract, Thomas Cunningham Survey, approximately seven miles southwest of Emory.

The western Wood County wildcat of Philclark Drilling Company, Dean Bros. & Adkisson on the Lizzie Finklea 175-acre tract, Benjamin Anderson County, logged top of Pecan chalk at 2262 feet, with an elevation of 393 feet, and was ordered abandoned after drilling to 2510 feet by reason of being about 120 feet lower on structure than the eastern Rains County test of Rio Oil Corporation's Easter 1. The latter

was abandoned in salt water at 4353 feet last November.

The three-well campaign slated for Wood County by E. DeGolyer, head of The Felmont Corporation, and others has been temporarily deferred pending the completion of abstract work and a field party survey of each of the tracts comprising the Alba and Quitman blocks. The third test is to be on the Yantis block. Protection acreage has been sold to major companies and several independents out of the three blocks at prices ranging up to $50 per acre.

C. D. Neff et al have moved in rig to drill in southwestern Henderson County on the H. G. Small 100-acre tract, Isaac Greeson Survey, about four miles north of the Cayuga field.

No showings of oil or gas were encountered by Tide Water Oil Company and Texas Seaboard Oil Company's C. T. Valentine 1, Anderson County wildcat situated about nine miles north of Palestine, in coring to 5240 feet, or about 40 feet below the top of the Woodbine horizon. The sand carried considerable shale and lime. Austin chalk was logged at 4725-4981 feet, with an elevation of 454 feet. Roeser-Pendleton, Inc., Fort Worth, is reported to be assembling a drilling block to the northeast of Montalba, and south of the wildcat project. Since all leases are being abstracted it is believed that the company will start a test shortly.

Shell Petroleum Corporation has made locations for two tests to be drilled as south and east offsets to T. J. Wood and Young's New Birmingham 3-A, the second and most productive oil well in the Rusk pool, Cherokee County. The latter drilled the discovery well on acreage farmed out by Shell Petroleum Corporation, and have started operations on New Birmingham 4, a north offset to the new producer in the Levi Jordan Survey. Roberts Brothers and others have obtained permit to drill H. E. Pryor 1, near center of three-acre lease, Jessie T. Jones Survey, situated north of production. Cal T. Scott, Turpin and Stidham & Thrasher's Whiteman-Decker 1, NWc of 30-acre lease, J. H. Armstrong Survey, situated near the southeast corner of the Jordan Survey, was drilling near the Pecan chalk level late last week. It is the only active test trying for an extension to the Rusk pool.

Kevin, Mont.—One new well started in the Kevin-Sunburst field, Toole County. It is Nepstead & Vander Pass' Government 19, SE NW 33-35n-2w, which is moving in material. This brings total drilling operations in the field to an even dozen.

East Texas North Area Extended West

Tyler, Texas.—Averaging 15 new oil producers each day the past week, the East Texas field's volume of completions regained a normal stride, with considerable new territory thrown open to development by an important extension in Upshur County. Approximately 4000 acres of producing leases have been proved for production since the first of the year by independents venturing out into doubtful territory along the northwest, east and west flanks of the huge structure. Each extension is followed up by intensive drilling on the intermediate acreage.

Territory situated several miles due north of Gladewater provided a surprise development when Bert Fields, Dallas contractor and producer, et al's E. L. Walker 1, SEc of 140-acre lease, J. M. Tallent Survey, Upshur County, developed hole full of oil on drill stem test from Woodbine sand at 3662-3665 feet, or 3291 feet below sea level, indicating a profitable flowing well in the making. It is about one half mile west of production. Preparations were being made to complete the well late last week after cementing 5½-inch pipe at 3624½ feet. Prospects are considered good for the northwest quarter of the Tallent Survey to be productive.

Recent extensions scored in the Wm. King and P. Whitstone Surveys, Upshut County, encountered poor sand conditions, and the wells do not have the production staying qualities as those in the field proper. However, the independents owning most of the surrounding leases have been quick to seize their opportunity to launch aggressive drilling programs, and in the Wm. King Survey are close spacing wells in the face of early appearance of bottom hole water.

Overtex Oil & Gas Company, Overton, scored a minor extension for the south portion of the field in completing John Rettig 2, J. H. Sparks Survey, flowing 34 barrels oil hourly through two-inch tubing from sand at 3640-46 feet, or 3310 feet below sea level. It is 660 feet west of the company's Rettig 1, SEc of 100-acre lease, which was drilled to 3682 feet, or 3339 feet below sea level, yielding salt water. The Falcon Company's F. Newton 1, NWc 73.65-acre lease, W. Clark Survey, situated on the southeast edge of the field, failed to kick off with a natural flow when swabbed down at a total depth of 3692 feet.

Twelve of the completions reported the past week failed to register natural flow when given initial production tests, and eight were equipped for pumping, while four were swabbed.

Independents continue to lead by a wide margin in total number of completions, having contributed 69 new wells the past week, as compared to 38 for the majors, owners of about 63 percent of the productive acreage.

Houston.—Considerable field activity in the past week was reflected in the completions list for the Texas sector of the Gulf Coast region, there being 19 wells removed from the active drilling list.

Of these, 17 were wells drilled in proven fields, and two were wildcats. Whereas both wildcats were dry holes, there were only two dry holes listed among the 18 field completions.

Walton-Keystone Wildcat Shows Heavy Gas Pressure

San Angelo, Texas.—Development of heavy gas production by Gulf Production Company's Keystone Cattle Company 2, the deepest of nine wildcats being drilled by the company to protect short term leases on the Walton-Keystone structure, Winkler County, from brown lime section at 2504-2515 feet almost resulted in a blowout before the drilling contractor could switch to 11½-pound mud. This test is in the NWc of Section 17, Block B-2, PSL Survey, and is three miles southeast of Sid Richardson et al's J. B. Walton-Pure 1, which is scheduled to resume drilling at 2945 feet early this week after lowering 10-inch casing, with 8,250,000 cubic feet of sulphur gas production from several upper horizons. The projected oil horizon for the area is expected to be encountered by the latter test within the next 150 feet, as first brown lime marker was logged at 2115 feet, or 832 feet above sea level.

The Walton-Keystone structure is

being touted as the next important oil strike for West Texas. The brown lime section, a reliable geological marker, is found at the highest point in the county, which has yielded one major and more than one-half dozen minor oil fields. Richardson et al began development late last year, but the drilling crews have more or less coasted along. It is possible that Gulf Production Company will have one or more tests vieing for oil discovery honors, if any are to be had. A structural dip of more than 150 feet was recorded by Gulf Production Company's Keystone Cattle Company 2, as compared to the original test on the Walton ranch, but the presence of the gas production indicates that a big structure exists. Gulf Production Company's Keystone 1, situated one half-mile southeast of the Walton gasser, has been temporarily delayed with casing trouble at 2290 feet, but drilling is underway on Keystone 3, 4, 5 and 6, while Keystone 7, 8 and 9 have rigs completed.

Operations have been started by The Texas Company on a semi-wildcat near the west line of Howard County on the I. W. Terry 485-acre tract, Section 62, Block 29, W&NW Ry. Survey. Lease contract required the starting of a test by June 2 to avoid forfeiture.

Crane County's development work is on the upgrade. W. L. Holloway et al have made location to drill in the southeast part of the county on the J. B. Mayberry 640-acre lease farmed out by a major company for the drilling of a test, which is slated to be 200 feet south and west of the center of Section 17, Block 35, H&TC Ry. Survey. Dobbs Oil Company, Dallas, has spudded its Jax Cowden 1, Section 38, Block 1, H&TC Ry. Survey, near the Pecos River.

Interest in the Tubb pool, western

East Texas Completions

Company, Well and Location	Init. Prod. Bbls	Depth
JOINER AREA—		
Agey Drl. Co., G. T. Moore 1 (20-ac)	480	3578
Jack Apple et al, G. T. Moore 2-A (20.66-ac)	480	3640
Big Indian Synd. (T. B. Reese, Rec.), Wolford 12 (40-ac)	8500	3723
Bill & Dave Oil Co., C. Young 3 (10-ac)	3000	3743
Bond Oil Co., D. Bradford 3-A (5-ac)	480	3602
F. H. Brown et al, Lelia Tipps 1 (22.4-ac)	250	3656
Burwin Oil Corp., M. Smith-Humble 6	600	3726
Capitol Oil Prod. Co., Frederick 2-B (1-ac)	500	3625
J. L. Collins & Co.-Stroube, Pingston 10 (53-ac)	6800	3659
Combined Oil Ints., G. W. Eaton 25 (100-ac)	4600	3788
R. H. Dearing & Son, E. McDavid 10 (78.6-ac)	600	3735
Elm Oil Co., G. W. Eaton-Hooser 8-B (21.52-ac)	6500	3791
F. W. Fisher et al, G. W. Wilson 5-A (3½-ac)	8000	3800
W. H. Gant-Garvin-Wegener, J. W. Harris 2 (394.58-ac)	1000	3626
Gulf, W. L. Murphy 12 (79.56-ac)	7600	3744
W. A. Hardin et al, L. B. Thompson-Allen 1 (6-ac)	480	3672
Haynes Oil Corp., J. T. Brown 10 (40-ac)	5000	3717
Humble, A. D. Blackwell 40 (325.79-Ac)	12,000	3669
R. E. L. Silvey 36-A (458.97-ac)	8000	3800
R. E. L. Silvey 47-A (458.97-ac)	10,000	3769
J. H. & I. W. Wooley 23 (201.53-ac)	7600	3665
Mattie Wooster 8 (74.23-ac)	3800	3821
Hunt Prod. Co., M. M. Barksdale 4 (18-ac)	9000	3754
R. W. Fair 22-C (211.4-ac)	9200	3668
Magnolia, J. R. Wright 30 (78.1-ac)	8000	3675
Marathon, H. L. Griffin 7 (65.61-ac)	500	3707
W. T. Grissom 83 (842.7-ac)	9500	3643
Monterey Oil Co., Burton Bros. (7.6-ac)	5500	3705
Nemo Oil Co., G. W. Eaton 2 (½-ac)	8800	3790
Overtex O&G Co., John Rettig 2 (100-ac)	2000	3646
Pet. P. L. & Storage Co.-W. H. McConnell, C. Arterberry 2 (13.2-ac)	5000	3829
Pine Pet. Co., Giles 7 (30.44-ac)	9300	3736
G. B. Ray Corp., J. B. Wilson 9 50-ac)	7500	3656
Regent Oil Co., L. Harmon 7-B (3.6-ac)	7600	3803
Restal Drl. Co., J. T. Brown 4 (16.4-ac)	8000	3759
W. L. & T. L. Sessions, S. B. Stone 9 (50.9-ac)	5500	3714
Shell, H. Brooks 15-A (176.4-ac)	1000	3714
H. Brooks 17-A (176.4-ac)	3500	3712
Sinclair Prairie, Mayfield 39-A (374.14-ac)	7200	3847
J. B. Wilson 10 (65-ac)	5600	3759
Sonbar Corp., A. P. Finney 12 (62½-ac)	4200	3714
Standard (Kan), M. L. Thompson 7 (59.02-ac)	9500	3628
E. R. Stewart & R. M. Egan, Bateman-Pace (Sun) 2 (25-ac)	7500	3772
A. M. Sutton & Hawkins, M. Smith 2 (10½-ac)	480	3645
L. V. Thompson 2 (43.6-ac)	600	3668
Texas, J. M. Price 10 (90-ac)	3600	3635
Tide Water, M. Thompson 2-B (10-ac)	5500	3710
Trippmead Oil Corp., M. L. Thompson 5 (7.19-ac)	9300	3808
Venable Oil Co. & McClanahan, Birdwell 27 (147.04-ac)	9000	3626
Birdwell 33 (147.04-ac)	7600	3634
Ward Oil Corp., E. S. Thrash 29 (100-ac)	8600	3780
KILGORE AREA—		
Bay Oil Corp., W. Smith 6 (19½-ac)	9100	3560
J. Beren et al, Abe Holt-Shell 7 (68½-ac)	750	3682
J. M. Burnham & Johnson, King 1	8500	3658
Cordova-Union Oil Corp., C. O. Christian 5-C (36-ac)	10,000	3671
Gulf, W. Florence 16 (165.09-ac)	7000	3710
Angus Spear 37 (277.56-ac)	8000	3569
C. Strong 15 (137.3-ac)	3500	3687
J. B. Watson 17 (92.97-ac)	6800	3587
Hawkins & Howell, C. H. Hedge-Humble 1 (48½-ac)	500	3578
Humble, L. D. Crim 158 (914.51-ac)	9200	3724
J. N. Peterson 34 (222.1-ac)	9000	3666
H. L. Lockhart et al, M. B. Weiss 2-A (3.06-ac)	10,500	3625
La. O. R. Corp., W. M. Jernigan 11 (111.04-ac)	8800	3635
Magnolia, Nat Bean 13 (103.29-ac)	100	3581
J. H. Merritt & Georgian Corp., D. Jones 1 (1.8-ac)	500	3669
Harry S. Moss et al, F. Marshall 9 (38.93-ac)	750	3552
Napoleonic Oil Co., D. Jones 2 (8-ac)	500	3663
Navarro Oil Co., J. M. Peterson 9 (42-ac)	9500	3685
Shell, M. H. Bivins 15-A (113.4-ac)	7600	3612
Stodel Oil Co., Dee Smith 9 (25.03-ac)	7500	3598
Sun-Texas Seaboard, J. N. Campbell 12 (106.9-ac)	...	....
Texas, H. T. Elder 28 (139½-ac)	6500	3668
Tide Water, J. M. Blackman 15 (80.86-ac)	8000	3647
M. B. Hughey 26 (200-ac)	7000	3500
Welch & Sandler Oil Co., Barnett-Tidal 7 (100-ac)	5200	3711
LONGVIEW AREA—		
Amerada, Catie Bumpas 13 (98.3-ac)	8400	3600
Atlantic, J. J. Fuller 6 (49-ac)	6500	3714
W. E. Jones 1 (31.09-ac)	9000	3656
J. C. Judge 74-A (455-ac)	11,000	3520
J. M. Tuttle 8-A (58.17-ac)	9500	3637
H. W. Black & Case, H. M. Burroughs 4 (30½-ac)	6500	3712
Cabot Carbon Co., L. Graves-Rio 12 (105.9-ac)	8800	3628
C. & G. Oil Co., T. B. Harris 20 (91-ac)	7700	3558
Clark & Cowden Drl. Corp., J. M. Christian 8 (42¾-ac)	9600	3651
Eastern Texas Pet. Co., D. A. Fleet 6 (112-ac)	1000	3650
Empire G&F Co., J. T. Jeter 5 (123-ac)	8300	3576
L. A. Jeter 17 (121.53-ac)	8300	3560
FHE Oil Co. et al, B. C. Christian 19 (87-ac)	6500	3720
Faith Oil Corp., J. C. Barrett 15 (140-ac)	2000	3651
Fleming-Kimbell Corp., J. Barnes 9 (30-ac)	7500	3712
C. E. Florence & C. W. Meadows, J. W. C. Edwards 1 (8/10-ac)	7600	3650
Gulf, S. C. Fishburn 27 (200-ac)	7000	3537
Harry Hanbury et al, P. P. Ballowe 1 (3.9-ac)	7000	3641
Humble, A. L. Hughes 13 (91.8-ac)	7800	3629
Iowa Payne Oil Co., W. H. York 7 (42-ac)	9000	3596
Lucey Pet. Co., R. Christian 7 (32-ac)	10,000	3614
C. H. Lyons & N. F. Neeley, E. O'Byrne 3 (20-ac)	4500	3694
Magnolia, J. W. Stone 3 (66-ac)	...	...
T. W. Tuttle 6 (48-ac)	8500	3615
J. K. Murphy et al, A. J. Sanders 1 (1.19-ac)	7600	3676
Nathan Oil Co.-Roy A. Nelson, Walker 12 (40-ac)	6800	3571
Walker 13 (40-ac)	7200	3602
W. L. Pickens & Geo. J. Greer, H. Castleberry 1 (86/100-ac)	9800	3683
Shell, A. N. & V. King 20 (160-ac)	7200	3621
V. Sorrell et al, Fee 1 (4/10-ac)	7200	3564
Stroube & Stroube, Mackey-Humble 20 (314.6-ac)	2500	3637
Sun, T. C. Ramey 9 (86.54-ac)	1500	3791
Superior (Cal.), Andrew Jones 10 (64.32-ac)	12,000	3653
ANDERSON COUNTY (Cayuga field)—		
Tide Water & Texas Seaboard, G. W. Ware 9 (571.65-ac)	2500	4097
VAN ZANDT COUNTY (Van field)—		
Peden-Olson Oil Co., W. S. Brannon 1-B	*	1323
Pure, C. H. Cannon 6 (33-ac)	75	2927
I. D. Miller 10 (60-ac)	5000	2953
ELLIS COUNTY—		
Murphree & Coker (was Bodie Finley et al), Coker 1	*	1678
HUNT COUNTY—		
Cauble et al, Y. B. Reed 1	*	3535
VAN ZANDT COUNTY—		
Tidwell & Rogers, L. E. Breucher 1.	†	3233
WOOD COUNTY—		
Philclark Drl. Co.-Dean & Adkisson, Liz Finklea 1	*	2510

*Failures; †Junked; ¶Million cu. ft. gas.

Crane County's isolated one-well area, is centered on American Liberty Oil Company (Truett B. Cranfill's) J. B. Tubb-Humble 1, SWc Section 11, Block B-27, PSL Survey. It has drilled to the 3115-foot level, carrying 1,500,000 feet of gas, with a show of oil logged at 2925-29 feet. Top of Yates sand was reported at 1470 feet, and first lime at 2400 feet, with an elevation of 2536 feet. It is about 1¾ miles southeast of Gulf Production Company and Truett B. Cranfill's Tubb 1, which opened the pool in October, 1930, from 4300-foot lime, and continues to flow 20 barrels oil daily, with sufficient gas to supply several drilling tests in the area. Loffland Brothers et al's J. B. Tubb-Gulf 1, C NW¼ Section 9, and about 1700 feet northeast of the discovery well, is preparing to cleanout for shot with nitro and acid treatment, having been idle at 4510 feet since last December. A small oil producer from the 4300-foot lime is believed possible.

Gulf Production Company's M. B. McKnight 1, C SW SW Section 9, Block B-21, PSL Survey, testing a large wildcat block about 4¾ miles northeast of the Tubb pool, will be deepened to the 4300-foot lime after developing minor oil and gas showings in brown lime at 3095-98 feet and 3118-23 feet. Gulf Production Company's W. N. Waddell et al 1, C NW NW Section 4, about 2¼ miles northwest of the Tubb pool, is scheduled to resume drilling with heavy duty rotary rig from its present depth of 4595 feet. This wildcat is to try for production in the Ordovician lime section, and is preparing to drill to the 10,000-foot level.

Sun Oil Company and Atlantic Oil Producing Company are to operate jointly in drilling a wildcat near the north line of Ector County and on the O. B. Holt Jr. land, SWc Section 5, Block 43, T&P Ry. Survey, T-1-N, about 2½ miles northwest of the North Cowden field. Other than being on a favorable production trend the test has comparatively little merit, as it is considered isolated from the field's producing structure. Barnsdall Oil Company's Mertie Smith 2, SWc Section 2, Block 43, T-1-S, partially defined production in the North Cowden field on the southeast flank in proving dry at 4381 feet, although it offset producers to the south and west. It was plugged without drilling to the water table. Landreth Production Corporation et al's Cowden et al 1, SWc Section 18, Block 44, T&P Ry. T-1-N, situated about 3½ miles northwest of the company's wildcat oil and gas producer on the Scharbauer ranch, northwestern Ector County, had approached a critical level in drilling to 4245 feet, or 1053 feet below sea level, with only a small volume of gas showing. The discovery well plugged back from sulphur water at 4236 feet, or 1074 feet sub sea, to 4186 feet, or minus 1024 feet.

Failing to extend oil production in the lime horizon to the southwest in the Wentz pool section of the McCamey district, Texas Pacific Coal & Oil Company's Cordova Union 1, NWc E½ Section 33, Block 1, MK&T Ry. Survey, successfully plugged off sulphur water in lime at 2174-2235 feet and made a 143-barrel pumper from sandy-lime zone at 2126 feet. The oil tests 33 gravity, as compared to 27-28 gravity oil produced from wells completed in the dolomite lime. The company will drill a north offset and Shell Petroleum Corporation the west offset if the outpost well maintains a commercial yield.

Plugging World's Deepest Test Back

San Angelo.—Gulf Production Company has plugged back from 12,786 feet to 9952 feet on J. T. McElroy 103, world's deepest test, after concluding experimental work with geophysical instruments, and will gun perforate the 7⅝-inch casing at several points above the plugged back depth. Plans are to use acid on the several lime horizons that registered small oil and gas showings on the well log, then if found nonproductive the well will be plugged back to the 2900-foot level.

San Antonio, Texas.—Plummer Drilling Company completed J. Zimmer 4 for one of the best producers in the Coleto Creek field, being estimated at 20 barrels per hour from sand at 2830-32 feet. Casing was set at 2826 feet.

Childress Wildcat May Not Produce

Wichita Falls, Texas.—Prospects for a commercial oil producer from the Canyon lime horizon logged at 5630-5653 feet by the southeastern Childress County wildcat of Alma Oil Company, headed by Robt. Watchorn, Oklahoma City, on the Mollie Low land, C NW NW Section 417, Block "H", W&NW Ry. Survey, looked doubtful the past week due to the appearance of salt water when efforts were made to swab the hole clean of drilling fluid. Unloading of the hole and an actual test of oil and water production has not been complete, although more than ten days have elapsed since initial efforts were made to swab the well in. The company holds leases on a large surrounding block, and has not made any sales to the many independents that sought closein protection before the well showed salt water. Majors refused to enter into competition for the few available leases within the block, and those around the edges.

Mid-week swabbing test made on the wildcat lowered the fluid level in the 2½-inch tubing to 2500 feet, yielding a small volume of high gravity oil with salt water. Operations were halted for eight hours, and the fluid column rose about 800 feet, including approximately 500 feet of oil on top. Officials of Alma Oil Company were confident that a big producer would develop from the 5600-foot lime, and prepared to take care of such a well with ample storage and surface connections. Reports indicate that the company may deepen the well in search of production in the Strawn, next promising horizon, or proceed to the Ordovician lime section, should further testing of the Canyon fail to change the status of the wildcat. A string of 8⅝-inch pipe was cemented at 5630 feet.

A number of proposed wildcats for Childress, Hardeman and Foard Counties by independents have been held up for the present. Hardeman County gained a new test the past week through the starting of operations by C. B. Duffield, H. C. Mortlock and J. F. Forrester on the S. I. Davenport land, NEc SE¼ Section 64, Block 16, H&TC Ry. Survey, near center of 5000-acre block on the Hardeman-Wilbarger County line. It is about 1½ miles northwest of J. C. Bertrand and W. B. Hamilton's Karl Dreischner 1, Wilbarger County, abandoned last October at 3689 feet above the Canyon zone.

The Anarene area, Archer County, offers an interesting development from the wildcat test of Grace & Woods on the Archer County (J. H. Turbeville) land, NWc S½ SE¼ of T. P. Glass Survey, A-141, with oil showing from lime at 2827-30 feet and broken sand at 2830-32 feet. Casing has been cemented at 2827 feet for a production test. It is near a 3748-foot failure drilled last fall by W. J. Grisham and A. R. Dillard that showed some saturation in the 2800-foot level after proving dry in the Canyon line at 2337-47 feet. In the North Holiday pool,

Archer County, Shappell Oil Company's J. L. Jackson 10, Block 23, Denton County School Lands, League 4, failed to score a water shutoff in trying for production in the Canyon at 2593 feet, and has been plugged.

North Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
L. T. Burns et al, W. D. Pace 1, blk 163	*	1256
J. J. Perkins 1, sec 1888	*	1045
Continental, Falls County 17-B	72	1122
W. J. Logan 9-A	102	1181
Consolidated, H. L. & J. F. Ward-Conoco 1	*	1048
Cullum & Sinclair Prairie, Falls-Scranton 14, blk 17	*	1112
C. S. Davis et al, Benson 1, sec 1828	*	903
FHE Oil Co., W. T. Richardson 10, sec 2424	*	1450
W. T. Richardson 12, sec 2424	175	1451
Florey Oil Co., F. Brazina 1-B, sec 2410	*	1534
Grace & Woods, J. M. Powell 1, blk 119	*	1504
W. B. Hamilton Pet. Co., Longley 2-A, blk 98	80	1149
W. Pace 28, blk 99	100	1150
Huggins Oil Co., Walter Ford 3	15	1001
S. S. Kouri & Hooker, J. P. Montgomery 1, blk 133	*	1118
N. H. Martin & Son, J. H. Turbeville 1, blk 176	*	1488
Perkins - Cullum Oil Co., Falls County 174, blk 12	50	1158
Falls County 177, blk 5	75	1203
Pet. Prod. Co., J. T. Richardson 8-E, blk 1	10	1261
BAYLOR COUNTY—		
Consolidated-Pet. Prod, Co., Portwood 5-D, sec 1587	100	1409
Ray & Staniforth, Portwood 4-A, sec 1587	250	1384
CLAY COUNTY—		
Taylor & Wagner, Geo. Myer 1, blk 24	*	400
COOKE COUNTY—		
Bridwell Oil Co., J. G. Coffee 1	*	2049
J. F. Flusche 1	*	1788
Hess & Hutton, F. Truebenbach 2.	*	1522
Kewanee O&G Co., Timmins-Hyman 22-A	35	1555
R. A. Moore et al, J. C. Whaley 1	*	415
Texas Co., Muerer 1	100	767
United Prod. Co., S. B. Meadows 1.	*	1806
JACK COUNTY—		
Bissey et al, C. J. Lewis-Brannon-Smith 1	*	304
MONTAGUE COUNTY—		
Continental, J. W. Lawler 8	307	1746
WICHITA COUNTY—		
Birdwell Oil Co., L. P. Douglas 1	50	1959
Golding & Cochran, Waggoner Bros. 18-C	17	1436
Horwitz & Oldham, D. E. Hooks 3.	75	1223
J. S. Smith et al, C. Birk 3	*	470
C. C. Birk 2	3	283
Waggoner Ref. Co., Waggoner Est 5-X, blk 2	15	1982
WILBARGER COUNTY—		
Hegralle Oil Co., Waggoner Est. 13-A, sec 35	250	1872
John O'Neal et al, Waggoner Est. 1-B, sec 20	8	543
YOUNG COUNTY—		
B. C. Gilmore et al, G. P. Stewart 1, blk 5	*	567
L. G. Hawkins et al, J. M. Kirkland 1, sec 2249	75	689
Holbrook & Woods, S. E. Watson 9	8	752
Chas. Knox et al, Mrs. E. Taylor 1, sec 3407	125	2718
Martin & Hines, J. W. Bullock 2, sec 261	15	605
Pet. Prod. Co., J. B. Marrs 1, sec 356	*	860

*Failures; †Junked; ¶Million cu. ft. gas.

Rutledge Discovery Causes New Pettus Trend Development

San Antonio, Texas.—A new trend of Pettus sand production is being developed between the Caeser and Pettus fields of Bee County. The recent discovery of the Rutledge pool by Worth Oil Company has attracted a fair amount of interest in this general zone in the way of leasing activity. In fact, there may be a conservative, but important wildcatting campaign along the strike.

The new Rutledge pool, sometimes referred to as the Worthington or Worth area, was opened May 1 through the completion of Worth Oil Company's Rutledge 1-A, northeastern portion of the A. Hadley Survey. The well was completed in Pettus sand at 3386-94 feet, flowing slightly in excess of three barrels of 30.2 gravity oil (corrected), per hour along with a tremendous volume of gas. Temperature was 70 degrees. Casing pressure 1300 pounds closed in and tubing pressure, working on 5/16-inch choke, 1200 pounds. Elevation of the well is 390 feet derrick floor.

The well is located 5½ miles due west of the Pettus townsite and 1¾ miles northeast of the Grayburg pool.

Interest in this district started in June, 1930, when Grayburg Oil Company's A. J. Kimball 1 was brought in for an initial production of several hundred barrels of 34.6 gravity oil from Pettus sand at 3547-53 feet, elevation 370 feet. Due to mechanical difficulties, the test made salt water and was abandoned. It was a freak situation and until a few months ago, all wells drilled in the immediate area were abandoned as failures. Eight holes, including the discovery, were drilled to the sand, several showing oil, but all making salt water and non-commercial. Mid-Continent Crude Oil Company, however, was successful in getting a small producer just southwest of the discovery well. A second test, drilled farther southwest failed to materialize as a producer when it cored too deep into the sand, it has sidetracked several times and is still attempting to complete.

Just northeast of the Grayburg field discovery, Wrightsman Oil Company has taken a saturated core in the Pettus sand and is in process of completion. If a producer, it will make two for the field at this time.

The action of the Grayburg pool, while a disappointment from the recovery standpoint, indicates the possibility of production on this particular trend. The new discovery by Worth Oil Company further outlines this new trend. In fact, it has been definitely proved that production through this zone runs in strikes, a series of major and minor faults running northeast and southwest trend through this sector. They create a series of "stair steps" of production on their southeast flank. The Caeser field, northwest of new Rutledge field finds production in the Pettus horizon at 3000 feet. As the fields step to the southeast, (in relation to trend) they become deeper, the West Tuleta field being at 4000 feet.

Just what the Rutledge pool will offer in the way of production remains to be seen. Worth Oil Company's Rutledge 1, several feet north of the discovery, junked

West Texas Completions

Company, Well and Location	Init. Prod. Bbls	Depth
ECTOR COUNTY—		
Barnsdall, Mertie Smith 2	*	4381
Stanolind, J. M. Cowden 17	1451	4252
FISHER COUNTY—		
Southern Oil Corp., A. E. Pardue 1-D	1000	3123
GLASSCOCK COUNTY—		
Simms, R. C. Coffee 7-A	480	2126
HOWARD COUNTY—		
Humble, W. R. Settles 11	1038	2440
JONES COUNTY—		
Sandy Ridge Oil Corp., Percy Jones 2	88	1937
PECOS COUNTY—		
Cardinal Oil Co., Tippett-Kirby 34-E	10	532
Conoco & Stanolind, Tippett 5-C	206	556
UPTON COUNTY—		
Magnolia, Ed. S. Hughes 3	85	2295
TP C & O Co., Cordova Union 1	143	2235
WARD COUNTY—		
California Co., B. D. Durgin 31	940	2528
Gulf, Hutchings 41	518	2791

*Failures; †Junked; ¶Million cu. ft. gas.

Texas Panhandle Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
GRAY COUNTY—		
Bradshaw O&G Co., E. L. Sackett 5	340	3308
Champlin Ref. Co., J. J. Taylor 1	¶½	3064
Continental, Finley-Brown 11	710	3005
Carrie Wright 9	1002	2875
Empire, A. J. Culler 5	295	3264
Herrmann & Dungan, M. B. Davis 1	¶26	2850
I.T.I.O., A. Smith 8	338	3278
Int'l Pet. Corp., R. S. McConnell-Gulf 2	†	3030
Mazda Oil Corp., Combs-Worley-Shell 6	1113	2995
Mordyan Pet. Co., M. B. Davis 4	1004	2819
Skelly, H. Schafer 26-E	574	3314
Wilcox, Combs-Worley 35	218	3036
HUTCHINSON COUNTY—		
Danube Oil Corp., Johnson-Gulf 2	2625	3095
H. J. Wasson, Tr., E. E. Watkins 5	351	3005
MOORE COUNTY—		
Magnolia, C. R. Jones 3	25	3404

*Failures; †Junked; ¶Million cu. ft. gas.

because of mechanical difficulties, topped sandy shale at 3393-3404 feet, and sticky shale from 3404-24 feet, showing a total of 31 feet of producing section to the bottom of the hole. With an excellent sand section, good pressure and normal saturation, it is possible that this will be a rather prolific area. It is well cut into a number of very small leases, held by a number of operators, mostly independents, hence a rather active development campaign is in prospect.

Outlet for the Grayburg pool is now available only through the trucking method. Falcon Pipe Line Company, however, is providing an outlet to the Rutledge area through the construction of a feeder line from its line between the Caeser field and railroad car loading racks at Pettus.

Equipment being used in the district is the same as in the regular Pettus field. The high-pressure wells along the top of the structure, where the gas/oil ratio will be high, will require the high pressure separators, while those lower on the flank will use the low pressure equipment. Drilling is rather rapid, the wells being practically pumped down. Little coring will be done, except just above the producing horizon. Several shallow gas sands have been encountered, but these will be controlled through the use of heavy mud.

Wildcat Spuds on Large Matagorda Island Block

Houston.—Matagorda Oil Corporation spudded in on a wildcat last week located on Lot 294, Matagorda Island, Calhoun County, according to a letter from R. S. Miesse, president of the corporation.

The test is equipped with a No. 7 steam rotary rig. It is the first to be drilled on a block of approximately 7000 acres held on the island by the above company.

Jackson County

San Antonio, Texas.—Shell Petroleum Corporation's McCrory 1, seven and one half miles southeast of Ganado in Jackson County, has been abandoned after drilling to a total depth of 7408 feet. It is in the southeast corner of Section 15, Morris & Cummings Survey.

East Texas Gives Permit List Boost

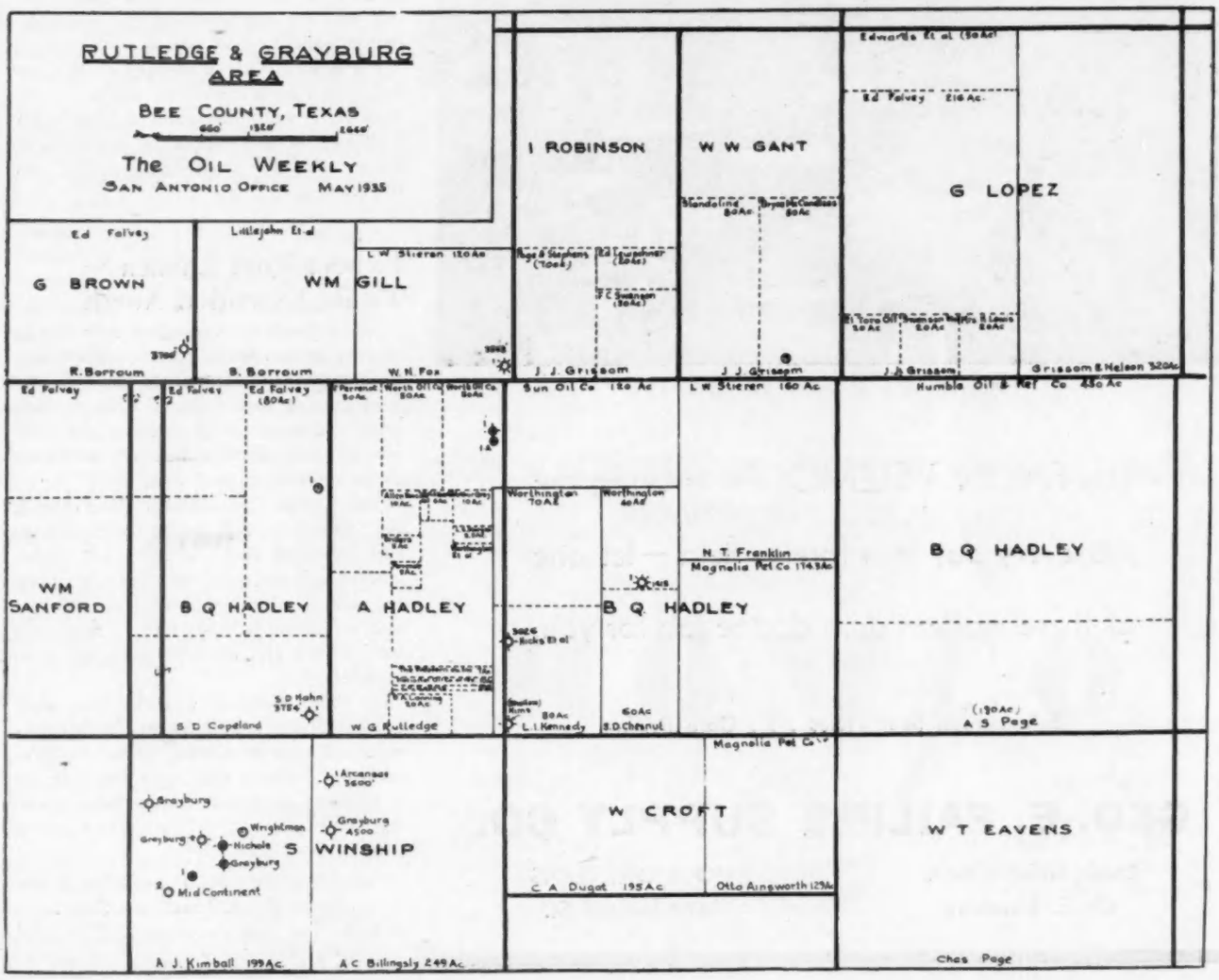
Austin, Texas.—The Texas Railroad Commission last week approved permits for the drilling of 381 new oil wells in Texas, 140 more than were allowed the week before.

This sharp increase may be accounted for by the approval of 208 permits for wells in the East Texas field. There were 88 in Rusk County, 57 in Gregg County, 30 in Upshur County, 21 in Smith County and 12 in Cherokee County.

In North Texas 66 new permits were allowed, with 36 in Archer County and 22 in Young County. The adjacent West Central Texas District reported 10, while there were eight in East Central Texas.

Southwest Texas reported 37 new permits with 22 in Bee County. In the Gulf Coast District there were 29 widely scattered.

There were 15 permits for wells in the Panhandle and eight in West Texas.



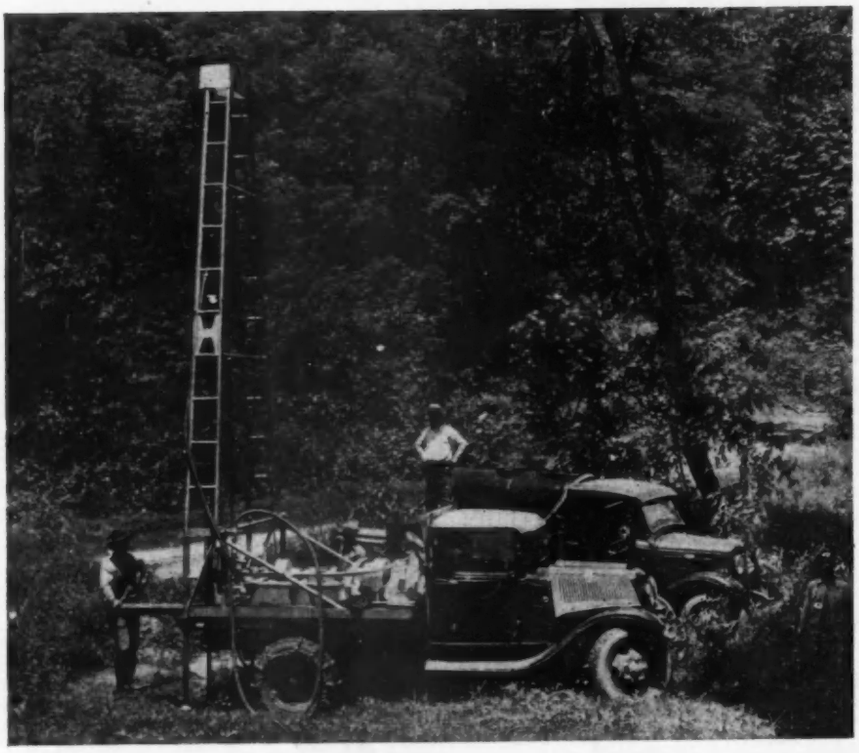
Shut In Loma Alto Discovery Well

San Antonio, Texas.—Texio Oil Company and Illinois Oil Company's Atkinson 1, discovery well of the new Loma Alto field, McMullen County, is shut in for storage. The well has filled 500 barrels of storage, all that is available on the lease.

The well was brought in May 29 at 2195-2207 feet, flowing 25 barrels per hour through ¼-inch choke on tubing. It flowed for two hours, but went dead. It finally was revived and flowed through a ⅛-inch choke by heads, the average being 10 barrels per hour. The pressure is very low, but the quantity of fluid is rather great, making natural lifting difficult.

A number of tentative locations have been made in the area, but only an east offset to the discovery well on the same tract has been definitely announced.

There is a difference of opinions as to where the production is coming from. Some contend that it is in the Hockleyensis, while others are of the opinion that it is the Government Wells sand. It is likely, however, that it is the former, rather than the deeper level.



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Plymouth Completions Indicate Prolific Area

San Antonio, Texas.—Showings of the first four wells drilled in the new Plymouth field, San Patricio County, indicate that this area will be a rather prolific producer, covering considerable acreage.

Heep Oil Corporation's E. H. Welder 1-E, northeast corner Section 46, one mile southwest of the discovery well, missed the 5500-foot sand, but picked up another sand section from 5578 feet to 5670 feet, its total depth. Water was shown in the bottom and casing was set to the total depth. It was perforated at 5659-63 feet with 16 hours, coming in for a flow of 42.5 barrels per hour through 5/16-inch choke, showing a working pressure of 900 pounds. The gauge was for a period of six hours. Oil is 34.2 gravity.

Plymouth Oil Company's Welder 2-C, one and one-fourth miles northeast of this well and one-fourth mile east of the discovery producer, showed a thin sand section at 5525-28 feet, the discovery well's level, and was carried to 5624 feet, showing oil production in a sand section at 5594-5624 feet. Casing was set and preparations are now being made to drill plugs.

Plymouth Oil Company's Welder 3-C, one-fourth mile due north of the discovery well, has sand at 5486-5501 feet and is in process of completion. Plugs already have been drilled on the casing.

Expect Port Lavaca To Be Extended North

San Antonio, Texas.—One well was in process of completion, and a second was testing the sand late in the week in the Port Lavaca area, Calhoun County. Both wells are north of production and indicate the addition of at least one half mile to the present proved area.

The Texas Company's R. Duelbuhr 1, M. Sanchez Survey, drilled to below 6450 feet, plugged back to 5850 feet, sidetracked and re-drilled the sand. It topped the sand at 6207 feet, drilled to 6246 feet and set casing at 6244 feet. Plugs have been drilled and the well is preparing to complete.

A short distance west of this well, Adrian Moore's McMaster 1 is in saturated oil sand at 6249-66 feet and is preparing to make a drill stem test. It has a series of sand and shale streaks, showing both gas and oil from just below 6100 feet.

Slightly more than three miles southwest of production, The Texas Company's Martin 1 is shut down at 7325 feet on account of high water and is to be carried

ahead to 7500 feet. About one mile northwest of this well, the same company has location for Packney 1, 1504 feet from the south line and 466 feet from west line of lease, and in the Rodriguez Survey.

The Texas Company has several other active operations. Geryk 1 is coring in shale at 6270 feet; Kupatt 1 is waiting on cement after setting 1300 feet of 10-inch casing; Ada Foster 1 is completing water well.

The gauges on the three producing wells is as follows: The Texas Company's Wehmeyer 1, flowed 67.5 barrels in 24 hours through 3/64, 1/32 and 1/16-inch chokes, duration of each test not being announced. Steinberger Petroleum Corporation's Shofner 1, discovery oil well, flowed 151 barrels in 24 hours through 9/64-inch choke, showing tubing pressure of 1575 pounds and casing pressure 1875 pounds. Halliburton Oil Producing Company's No. 1 Burton flowed 72.9 barrels in 24 hours through 1/32-inch choke with tubing pressure of 1650 pounds and casing pressure 1800 pounds.

South Bee County Is Being Watched

San Antonio, Texas.—Several deep tests in southern Bee County, one of which has had numerous oil and gas showings, has turned attention to this area as a probable new oil district. Two new operations, both to deep levels, were commenced during the week.

Humble Oil & Refining Company's Thompson 2, Garret Roache Survey, is running seven-inch casing at 5978 feet in an effort to overcome heaving shale. This well has an interesting sand at 3984-4008 feet, testing salt water and some pressure. Another sand section from 4850-4884 feet showed considerable oil and some salt water. Another sand was found at 5291-99 feet, showing some gas. Between 5354 feet and 5405 feet, it showed a heavy gas pressure.

About a mile northwest of the above well, the same company is rigging up for J. C. Woods 1, located 4891.5 feet west along fence line from southeast corner of Wood 4026.3-acre tract, thence north 15 degrees east 466 feet, in the William Burk Survey.

G. M. Church is rigging up J. C. Woods 1, northeast corner 427-acre tract in J. Ryan Survey, three miles south of Beeville. Contract has been let to Lonnie Glasscock.

Felmont Corporation's J. T. Earnest 1, in the Bee County School Land Survey No. 17, four miles southwest of Yougeen, has been abandoned at 6340 feet. It has several interesting shows.

New Government Wells Trend Area Is Opened

San Antonio, Texas.—Another new Government Wells trend producing area, the second in the same number of weeks, was opened through the completion of Santa Clara Oil Company's Wood-Welder 1 for an initial flow of 600 barrels of oil per day through 3/8-inch choke on tubing. The well is showing tubing pressure of 320 pounds and casing pressure of 525 pounds.

It is located 330 feet from the north line and 2310 feet from the west line of Section 385, Duval County, and is one mile south of Dulce Oil Company's (was Harvey & Henderson) Chernoskey 1, producing from the Hockleyensis sand 300 feet above this new producer's level.

The well has an elevation of 513 feet, derrick floor, with sand recorded at 2473-81 feet, and bottomed in sand. It previously has shown a small amount of gas at 2175-78 feet in sand and sandy shale in the Hockleyensis.

This new discovery, which is from the Government Wells sand, is considered of great importance due to the

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excellent recovery being obtained from the same horizon in the field bearing that name.

About 12 miles southwest of this discovery in the Loma Novio district, which is flank production on the Government Wells field structure, an active development campaign is getting underway. Until now, the majority of the work has been in outpost wells and wildcats, their successful completions bringing fully 3000 acres of proven area into the field.

Humble Oil & Refining Company's Mucio Vela 3, Section 42, is one of the best producers thus far completed in the field. It showed an initial flow exceeding 37 barrels per hour from sand at 2700-14 feet.

Frank Gravis is providing a west extension to the field through the completion of J. W. Byland 1, Block 4, Section 78. The well is showing for a big well at 2578-88 feet. Several miles north of this well and on the west side of production, Byrd Oil Company's Wright et al 7, SE Section 101, made a big gasser in the Loma Novio sand. Both wells are on the east edge of the Government Wells field and indicate the possibility of the producing sand lens of the Government Wells field overlapping the producing zone of the Loma Novio field.

Several New Wells in Dirks-West Tuleta Area

San Antonio, Texas. — Several more producers were added to the Dirks-West Tuleta district of Bee County during the week. None, however, were outpost wells.

Mills Bennett's C. W. Bassinger 2-B, made 20 barrels per hour through ¼-inch choke from 3846-52 feet. It showed a working pressure of 350 pounds. Same operator is completing C. W. Bassinger 3-A, showing for a good producer at the same level.

Dirks Brothers are completing Harris 2, Dugat Survey, and are setting casing on G. A. Ray 2-B. Several other tests are being drilled in the two pools by this concern, but they have not reached an interesting level.

Highland Oil Company's P. L. Campbell 1, Lot 22, Blanchard Survey, flowed 100 barrels the first eight hours through small choke from 3953-57 feet, but improved after finally cleaning.

Home Oil Corporation has completed C. W. Bassinger 4, but it has not been gauged.

Several miles to the south of this production and southwest of the town of Normanna, Judge Dougherty, Dirks Bros. et al's Hicks 1, Section 45, Uranga Grant, failed to establish commercial production in the Hockleyensis sand. It drilled to a total depth of 4248 feet, plugged back and perforated in the sand at 3613-30 feet, where it made a small volume of gas. Continued efforts are attempting to increase the flow.

Three Refugio County Wildcats Abandoned

San Antonio, Texas. — All Refugio County's wildcats, three in number, have been abandoned at depth ranging from 6000 to 7700 feet.

Temple Hargrove and Conroe Drilling Company's Wiess 1, NE NE Section 40, in the Bonnie view district, failed to show saturation in the expected horizons, and was stopped at 6008 feet.

Humble Oil & Refining Company's Marberry 1, J. Dunn Survey, three miles south of the McFaddin townsite, is dry and abandoned at 6510 feet.

Magnolia Petroleum Company's Mattie Wood 1, S. Turner Survey, seven miles west of Refugio, has been abandoned at 7705 feet. It had several hundred feet of heaving shale, sticking the drill pipe on bottom. Thirty joints remained in the hole, and after all efforts to get on bottom failed, the hole was quit. It is said, but not officially announced, that this well was headed for the Pettus sand,

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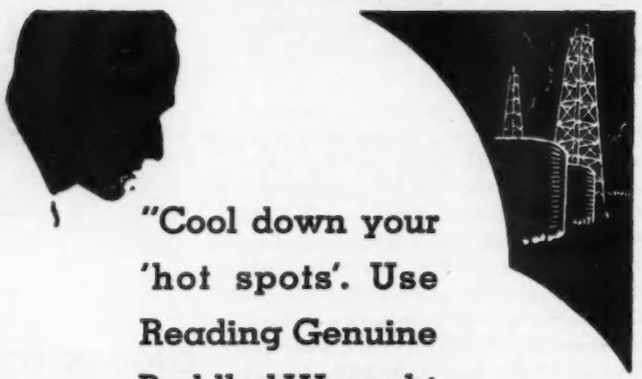

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Samfordyce Wildcat Fails to Produce Oil

San Antonio, Texas.—D. M. C. Oil Company's Daskam 1, Block 34, Porcion 45, four miles northeast of the Samfordyce field, Hidalgo County, failed to establish oil production at 4114 feet when a flood of salt water broke into the hole. It topped the sand at 4090 feet, and casing was run to a point thought to be at the top of the sand. A recheck indicated that the casing was set at 4074 feet. A short string of three-inch casing will be run to bottom and perforated opposite the probable producing horizon. The well did show some oil along with the salt water, which gives a slight promise for production after re-working.

Several wells in process of completion in the Samfordyce field are giving trouble due to high gas/oil ratio.

Cortez Oil Company's C. E. Smith 1-C attempted to complete at 2746-52 feet, but made a gasser spraying a little oil, the pressures being tubing 1100 pounds, and casing 1200 pounds. Liner has been cemented to bottom, perforated at 2749-52 feet and the well washed with oil. It is coming in slowly showing for an oil well.

Gem Oil Company's Seabury 2-A, made a wet gasser at 2765-71 feet. Flow valves have been installed, after which the oil volume increased. Further efforts are being made to bring about a heavier fluid flow.

Rogers Oil & Gas Company's F. Guerra 3-B made three barrels per hour through 3/32-inch choke from 2756-61 feet, bottom foot being shale. Pressures are 200 pounds on tubing and 300 pounds on casing.

Showers & Moncrief's C. E. Smith 2 is flowing 55 barrels per day through ¼-inch choke on tubing from 2745-54 feet.

South Texas Completions

Company, Well and Location	Init. Prod. Bbls	Depth
BEE COUNTY—		
Mills Bennett, C. W. Bassinger 2-B, nw se nw sec 7 Uranga gr (Dirks)	540	3852
Felmont Corp., J. T. Earnest 1, 2200 ft el, 466 ft nl Bee County School Land sur No. 17	*	6340
Highland Oil Co., P. L. Campbell 1, Lot 22, Campbell sub, Blanchard sur (W. Tuleta)	400	3957
BEXAR COUNTY—		
Jones Keiffer, E. W. LaGrange 1, 210 ft nl and wl of tr, F. Rolen sur	*	1010
Noble & Aiken, R. W. DeVilbiss 1, 843 ft sl, 319 ft el of 114-ac tr, Martinez sur	*	2230
DUVAL COUNTY—		
Al Buchanan & Blanco Oil Co., G. Ruiz 4, sec 73 (N. Loma Novio), csg perf 2703-9	96	3116
Humble, Mucio Vela 3, n sec 42 (Loma Novio)	890	2714
Magnolia, J. W. Riley 11, sec 45 (Gov't Wells)	150	2275
Santa Clara Oil Co., Wood-Welder, 330 ft nl, 2310 ft wl, sec 385, 1 mi s Seven Sisters, new sand	750	2481
Stieren Oil Co., Wright et al 1, sec 72 (N. Loma Novio)	235	2713
HIDALGO COUNTY—		
E. H. East, Tr., F. M. Carter 1, 330 ft el, 990 ft nl blk 19, Retama sub, Del Tule gr	*	1700
J. O. Moss et al, F. B. Guerra 1, tr 254, por 40 (Samfordyce)	*	....
Rogers O&G Co., F. Guerra 3-B, tr 254, por 40 (Samfordyce)	150	2761
Showers & Moncrief, C. E. Smith 2, tr 3-B, por 41 (Samfordyce)	125	2754
Smith & Devalt et al, Seabury 1, tr 256, por 38 (Samfordyce) perf csg 2813-25	100	2915
JACKSON COUNTY—		
Shell Pet. Co., McCrory 1, 466 ft sl and el sec 15, Morris & Cummings sur	*	7408
KARNES COUNTY—		
H. A. Pagenkopf, McAda 1, 330 ft nel and nwl of tr in Carlos Martinez sur	*	6253
LIVE OAK COUNTY—		
Baugh & McMillian, Walton & Campbell 1, 1500 ft nel and sel of D. R. Fant sur	*	4831
McMULLEN COUNTY—		
Loma Oil Co., Jacobs 38-A, Jacobs sur No. 8 (Jacobs)	*	1070
Motes & Bedingfield, H. L. Lark 8, blk 134, EWB Schrugham sur (Jacob)	75	1027
Texio Oil Co. & Illinois Oil Co., Atkinson 1, 330 ft sl and wl se w sec 13, Martha J. Dean sur (Loma Alto) discovery	500	2207
REFUGIO COUNTY—		
Temple Hargrove et al, Weiss 1, 330 ft nl and el nw sec 40, Bonnie View sub	*	6008
Hewitt & Dougherty, M. F. Lambert 18, Carr & Connell sur, blk 9 (Greta)	275	4387
Houston Oil Co., Pratt-Hewitt-Rooke 26, Mullin sur (Refugio)	*	....
Humble, Mrs. M. M. Marberry 1, 3700 ft nel, 625 ft sel of J. Dunn sur	*	6510
Magnolia, Mattie Wood 1, S. Turner sur, 330 ft sl and el of sur	*	7705
SAN PATRICIO COUNTY—		
Heep Oil Corp., E. H. Welder 1-E, 456 ft nl and el sec 46, Welder sub (Plymouth) new sand	1200	5670
STARR COUNTY—		
John Clopton, F. L. Tijerina 1, 150 ft nl, 785 ft wl blk 14, share 14-C, por 80	*	3948
Crawford et al, Hicks & Phelps 1, 150 ft sel and nel nw½ tr in Pedernal gr	*	1617
Hiriam Reed, Block Bros. 1, 150 ft nl and el blk 4, tr 28-A, por 80 (Rio Grande City)	*	1540
E. L. Smith Oil Co., A. Flores 1, 330 ft n Highway 4, 330 ft wl sh 250, por 38 (Samfordyce)	*	4508
Smith-Tex Oil Co., S C C C 1, blk 37, por 89 (Barbacoas)	*	....
VICTORIA COUNTY—		
Plummer Dr. Co., J. Zimmer 4, R. Manchola gr (Coleto Creek)	450	2823
WEBB COUNTY—		
Magnolia, C. Benavides 7, sw se sec 661 (W. Cole)	75	2357
ZAPATA COUNTY—		
Virginia Hardy et al, M. D. Slator 1, 614 ft swl, 150 ft sel blk 65, Mission Oil Co. sub Slator Ranch, Borrego gr	*	21
S. R. C. Oil Corp., Cuellar 15-B, blk 11, sec 65 (Escobas)	25	1279

*Failures; †Junked; ¶Million cu. ft. gas.

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Liberty County Wildcat Cores Small Sand Section

Houston.—Two miles northeast of Cleveland, Liberty County, A. L. Maxwell et al's M. P. Hinchcliffe 1, wildcat was coring June 7 at 5457 feet after having logged a foot section of oil sand at 5434-35 feet. The intervening formation contains thin streaks of oil sand.

Hinchcliffe 1, located in the northeast corner of H&TC RR. Survey 105, had Vicksburg at 3516 and the Hockleyensis at 4422 feet.

Live Oil Found in Ditch Of Sheppards Mott Wildcat

Houston.—Last week developed the most promising indication yet found of commercial oil on the old Sheppards Mott prospect in Matagorda County, an area that has defied, up to now, all efforts of wildcat wells to successfully penetrate heaving shale above the geophysical picture of the prospect proper.

H. M. Smith's Wadsworth 1, theoretically located off the flank of the structure, last week had some live oil in the ditch, presumably from sand at 8155-67 feet. Seven-inch casing, which has been set at 8376 feet, will be gun-perforated at the spot covering the 12 feet of sand referred to.

The Wadsworth test has encountered considerable mechanical difficulty in straight coring and electrical coring with the result that the operator was satisfied with the results of neither technique. This ambiguity with reference to true hole conditions may be responsible for the plug back job from 8418 feet to the present depth.

Location of the test is in Lot 3, Block 5, in the S. R. Fisher Survey. It is on the west flank of the mott.

Texas Gulf Coast Completions

Company, Well and Location	Init. Prod. Bbls	Depth
ANAHUAC—		
Humble, Middleton 2,	696	7126
BARBERS HILL—		
Superior, Barber 4-A	315	5010
CONROE—		
Malta Oil Co., Texas Osage 5	696	5096
P. C. Oil Co., Well No. 1	*	5193
Sun, Foster 32	168	5110
HULL—		
Republic Prod. Co., Dolbear 107	25	2596
HUMBLE—		
Sun, River 82	109	1311
Texas Co., C. O&G Co. 31	750	3170
LIVINGSTON—		
Sun, Pratt 3	54	4255
MANVEL—		
Texas Co., Belcher 8-A	¶750	3950
C. P. Dawson 2	500	5685
MYKAWA—		
H. C. Aiken et al, Waggonhauser 1	1056	4487
Hamil & Smith, Schap 1	*	4875
Harrison & Abercrombie, Gehring 1	7	4901
SOUR LAKE—		
Texas Co., Fee 320	100	1736
SPINDLETOP—		
Unity Oil Co., McFadden 89	20	2501
Yount-Lee, McFadden 74	180	3337
CHAMBERS COUNTY—		
South Gulf Oil Corp., R. M. White 1	*	7114
WALLER COUNTY—		
S. E. Gray, Tr., Gohlman & Lester 1	*	4480

*Failures; †Junked; ¶Million cu. ft. gas.

South Houston Wildcat's Performance Disappointing

Houston. — Stanolind Oil & Gas Company's Fee 1, broadly publicized as the probable discovery well for a new Harris County field at South Houston, rendered a disappointing performance Friday morning when at the end of one hour and 15 minutes of washing it flowed only a weak and small stream of water.

The well was testing Frio formation, having perforated casing with a gun somewhere between 4745, top of the Frio, and 5069 feet, bottom of the hole. Sand sections in this gap were reported to have totaled 185 feet.

The well is located in a block of 4200 acres originally blocked by Johnson & Johnson and later turned to Stanolind Oil & Gas Company. It is 330 feet south and 330 feet east of the northwest corner of a 20-acre tract on which two 500-barrel flow tanks have been installed.

Northeast Trend Is Indicated for Anahuac

Houston.—If correlations made June 7 of Humble Oil & Refining Company's Middleton 3, Anahuac field, Chambers County, are correct, operators in that field may expect a shift to the northeast in the trend of operations there.

Middleton 3, located 2233 feet northeast of production, ran about 120 feet (estimated) high at 7060 feet, top of the sand, drilled down to 7172 feet, logging sand. Pipe was being dropped at the location June 7 for completion.

Humble Oil & Refining Company completed Middleton 2 last week at 7126 feet for an initial flow estimated at 29 barrels per hour through a quarter-inch choke. Tubing pressure registered 1200 pounds.

Coincident with favorable showing of Middleton 3, Humble Oil & Refining Company is reported to have purchased June 7 a 240-acre tract east and a little north of the well from Rycade Oil Corporation for a large consideration, rumored at from $240,000 cash to $1,000,000 cash and oil. The tract is a mile from the well.

Dickinson Gas Well Now Produces Commercial Oil

Houston.—Turnbull & Irwin's J. Piazza 1, reported completed as a million-foot gas well in the Dickinson field of Galveston County last week, was flowing 183 barrels of 57 gravity oil June 7 through a three eighths-inch bottom-hole choke, with tubing pressure reading 400 pounds and casing pressure 600 pounds. The oil is slightly colored.

Completion data includes the following: total depth, 8418 feet; perforated stratum, 7945-70 feet; shut-in pressure before bottom-hole choke installation, 3000 pounds; gas production incidental to oil, 10 million cubic feet.

Coastal Louisiana Output At Record Level

Lake Charles, La. — Production in Coastal Louisiana last week reached the greatest peak in several years when 634 wells yielded a daily average of 113,414 barrels.

The largest contributor to the peak was Bosco field, where 51 wells yielded 25,348 barrels per day. Iowa field ran second, 58 wells there producing 17,483 barrels per day.

East Baton Rouge Test Has Core Barrel Stuck

Lake Charles, La. — Superior Oil Company's Duplantier Community 1, East Baton Rouge Parish test, considered the most important wildcat in South Louisiana, June 7 stuck the core barrel five feet off bottom at 7741 feet and was washing over in attempt to dislodge same.

The well is south of Baton Rouge and in Section 65-7s-1w. It is equipped with the heaviest and largest rig in the world—a rig designed to be capable of drilling to 15,000 feet.

Duplantier Community has had several showings of oil above 7021 feet.

Louisiana Gulf Coast Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BAY JUNOP—		
Texas, State Bay Junop 6-B	†	7840
BLACK BAYOU—		
Shell, F. Watkins	*	2050
GILLIS—		
Texas, Nickerson Fee 2	500	6748
GRAND ISLAND—		
Lincoln Oil Co., Rigaud 1	*	7039
PORT BARRE—		
Emerson Trotter, Sibdle 1	*	2700
ROANOKE—		
Shell, L. Kratzer 3	1380	7597
STARKS—		
Gulf Ref. Co., Lutcher Moore 37	*	4235

*Failures; †Junked; ¶Million cu. ft. gas.

South Louisiana Has Bad Completion Week

Lake Charles, La.—Field results in the Coastal section of Louisiana during the past week were at low ebb, only two commercially productive wells being recorded from the seven completions.

Dry or junked holes were recorded by Bay Junop, Black Bayou, Port Barre, Grand Island, and Starks fields. One of the producing completions was The Texas Company's Nickerson Fee 2 in Gillis field. The well flowed 500 barrels initially from 6748 feet. The other producer was Shell Petroleum Corporation's Kratzer 3, Roanoke district of Jefferson Davis Parish. It was gauged at 1378 barrels from sand bottomed at 7597 feet.

To Drill North Louisiana Block

Shreveport, La.—Two tests on a 20,000-acre solid block of wildcat leases assembled in Jackson and Ouachita Parishes in the North Louisiana Basin between the Monroe and Sabine Uplifts will be drilled immediately by American Liberty Oil Company. The block was assembled by David M. Lide of Dallas, Texas, after extensive geological and seismograph work.

Locations have been made and both tests are rigging. The company's Lusk 1, center NE NE 1-16n-1e, Jackson Parish, on the west side of the block will go to 6000 feet and the other, Golson 1, center NW NW 25-17n-1e, Ouachita Parish, will go to 4500 feet.

A wildcat block of 4000 acres has recently been assembled in Webster Parish by Witt and Eldridge of Kilgore, Texas, and tentative location has been made for R. H. Miller 1, NE NE 6-18n-9w.

Six Other Locations

Besides the locations mentioned, North Louisiana had six other locations last week. In the northeast "hot spot" of the old Pine Island field, Caddo Parish, four new locations were announced as follows: Nick Babare and Ark-La Gas Company's Ark-Gas Company 1, NE SE SE 16-20n-15w; Barnsdall Oil Company, School Fee 2, SE NW SE 16-20n-15w; Murray Oil Company, J. S. Noel 2, NW SW 15-20n-15w; and C. A. Tooke, Kihneman 1, NE NW SW 15-20n-15w.

Midway between the Urania field, La Salle Parish, and the Little Creek offshoot of the same field in Grant Parish, three miles to the southwest, Alexander and associates are moving in rig for Maxwell 1, Section 9-9n-1e, Grant Parish. Urania and Little Creek produce from the Claiborne-Wilcox contact slightly below 1500 feet.

P. E. Parsons and W. H. (Bill) Rowe, who recently assembled a large wildcat block in Winn Parish for a 5000-foot wildcat test, are moving in materials for Tremont Lumber Company 1, 660 feet south and 330 feet east NWc SW 10-12n-2w.

Two North Louisiana Shallow Wildcats Show

Shreveport, La.—Possibility of the opening of two new shallow gas fields in North Louisiana was seen last week with the behavior of two wildcat tests. Possibility of another producing horizon in an old gas field was also seen.

Plain Dealing Syndicate after testing an estimated eight to ten million cubic feet of gas when formation tester was run in L. A. King 1, NW NE NE 36-23n-13w, north Bossier Parish, on a 10,000-acre wildcat block, last week cemented four and one half-inch casing at 2824 feet; total depth is 2840 feet in Blossom (Ozan) formation. It is the fourth test drilled on this block.

Three and one half miles west of the erratic Spider field, DeSoto Parish, E. L. Foster and associates' Youngblood 1, Section 9-11n-14w, blew in making an estimated four million to six million cubic feet of gas with a spray of salt water, while preparations were being made to set liner and bail after plug was drilled in six and five eighths-inch casing cemented at 2735 feet. Total depth is 2860 feet. The well previously had a gas blowout which was killed before casing was cemented.

Possibility that the Blossom (Ozan)

North Louisiana

Company, Well and Location	Init. Prod. Bbls	Depth
BOSSIER PARISH (Sligo)—		
United Gas, Kerr A-1, ne ne 24-17n-12w	¶36	4295
CADDO PARISH (Pine Island)—		
Roy C. Golston, Donham 1, ne se, 16-20n-15w	15	2208
Leonard Co., Kuhn 1, nw sw 7-20n-15w	¶50,000	972
CADDO PARISH (Dixie)—		
Alaska Oil Corp., Dickerson 1, sw nw nw 15-19-14	*	2474
DE SOTO PARISH (Naborton)—		
W. T. Coleman, Walker 1, se se sw 18-12n-11w	¶1	881
OUACHITA PARISH (Monroe)—		
Farrell & Co., State 4, 50-20n-4e	¶11½	2145
SABINE PARISH (Converse)—		
O. S. Strickland et al, Whitney 1, sw sw se 32-10n-13w	†	1590
SABINE PARISH (Zwolle)—		
Hunter Co., Sabine 15, 1-7n-12w	*	2700

*Failures; †Junked; ¶Million cu. ft. gas.

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Lake Charles—Houma—Converse
Many—Monroe—Kilgore
Greggton

may be a gas producing sand in the Blanchard gas field, Caddo Parish, which now produces from the Nacatosh at 900 to 1000 feet, and from contact of upper and lower Cretaceous at 2800 feet, was seen last week when Junior Oil and Gas Company's Breard 1, Section 9-18n-16w, blew out suddenly when casing was shot at 1990 feet preparatory to abandonment. The gas flow was estimated at 15 million cubic feet daily and it blew out of control for several hours before being brought under control. This was one of the earlier of the 30 gas producers in the Blanchard field.

Sligo Field Extended to East

Shreveport, La.—The Glen Rose (upper Trinity) horizon of the Sligo gas field, Bossier Parish, was extended three fourths of a mile east last week when United Gas Public Service Company's R. V. Kerr Unit A-1, NE NE 24-17n-12w, was completed at total depth of 4295 feet gauging 35,937,000 cubic feet of gas with 1850 pounds rock pressure. This is the fourth Glen Rose gasser in the field. Six and five eighths-inch casing had been cemented in the well at 4002 feet.

Converse Field Yields Large Well

Shreveport, La.—The largest oil well completed in North Louisiana in several months was brought in last week in the southern end of the Converse shallow field when Schwanke, Braden and Morris' Archie Henderson 1, Section 29-9n-13w, Sabine Parish, was opened after being treated with acid at total depth of 1698 feet in Saratoga chalk, and flowed at the rate of 50 barrels per hour for the first two hours and then settled down to 20 to 25 barrels per hour. It is not yet included in the official list of completions pending a 24-hour gauge.

Run Record Length Arkansas Casing String

El Dorado, Ark.—A new record for the length of a string of casing for the state of Arkansas was established last week when Gulf Refining Company cemented seven-inch casing at 6224 feet in its deep test on the west side of the Smackover field, Werner Lumber Company 49, SW NW SW 5-16-16, Union County. Ten-inch casing had been cemented at 2293 feet. Total depth of the hole is 6431 feet, in Big Lime formation where a show of heavy oil was encountered. Casing was cemented after an electrical test was made.

The previous depth record for a string of casing in the state was set recently in H. L. Hunt, Incorporated's E. F. Gregory 15, SE SE 10-17-14, in the Rainbow City field, Union County, where seven-inch OD casing was cemented at 5834 feet. This well, drilled to 6911 feet in Permian salt, was plugged back and casing perforated at 3478 feet for a test of the Taylor sand, the regular producing horizon of this field. With 2000 feet of fluid in the hole, 80 percent water, after this test, operators last week were planning to blow the well with air.

The deepest test ever drilled in Arkansas was Lion Oil Refining Company's test in Section 4-16-15, Union County, that went to 7255 feet in Permian rock salt where it was abandoned, but no casing of the length of either of the present tests was set.

Coring Columbia County Block

El Dorado, Ark.—Jack Carnes of Camden, Arkansas, who recently took over a block of approximately 10,000 acres assembled in Columbia County, Arkansas, near the town of Waldo, is drilling a series of five core hole tests, preparatory to making location for a well. The first test was Davis 1, drilled in Section 5-16-21, to a depth of around 800 feet. This block was recently assembled by Jack Rhea after reported shows of gas in two water wells drilled at Waldo to a depth of 700 feet.

One Permit in Arkansas

El Dorado, Ark.—One drilling permit was authorized last week by the Arkansas Board of Conservation, as follows: Union County—McCreslenn Oil Company, J. C. Parker 2, 420 feet west and 230 feet north SEc NE SE 3-18-13.

Arkansas Completions

Company, Well and Location	Init. Prod. Bbls	Depth
COLUMBIA COUNTY (Stephens)—		
O. F. Whittaker, F. Hall 1, se se nw 11-15-20	15	2140
UNION COUNTY (El Dorado)—		
Earl Patterson, C. L. Smith 1, nw nw 29-17-14	20	2902

*Failures; †Junked; ¶Million cu. ft. gas.

Mississippi Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
HINDS COUNTY (Jackson)—		
Weaver & Alexander, Walthall 1, 25-6n-1e	*	2464

*Failures; †Junked; ¶Million cu. ft. gas.

Ozan Horizon Produces In El Dorado Field

El Dorado, Ark.—The first well completed in several years in the old El Dorado east field, Union County, and the first in the Ozan horizon, was added to Arkansas' producers last week when Earl Patterson's C. L. Smith 1, NW NW 29-17-14, was completed swabbing and flowing 20 barrels of oil daily. Total depth is 2902 feet. Production is coming through two-inch tubing. The well blew in several weeks ago and flowed for several hours at an estimated rate of 150 barrels of oil daily before sanding up. The well's completion will require drilling of several offsets.

A 15-barrel pumper in the Stephens field, Columbia County, was Arkansas' only other completion last week.

Two New Wildcats Start in Arkansas

El Dorado, Ark.—Three new locations, two of them wildcats, were added to Arkansas drilling reports last week. In Monroe County, Beaver Petroleum Company has derrick up for Hickman 1, SW SE SW 27-4n-2w. In Sevier County, southwest Arkansas, Vaughan and Pendleton who have several thousand acres held in Fee, made location for J. E. Johnson 1, NW SW SW 35-9s-30w. These operators recently junked a hole on this block and are preparing to abandon Fee 1, NW SE 35-9s-30w, after hitting a flow of fresh water at 1170 feet.

In the Urbana field, Union County, McCreslenn Oil Company is rigging for Parker 2, SE NE SE 3-18-13.

Mississippi Completion

Jackson, Miss.—Limits of the eastern part of the northern end of the Jackson gas field in Hinds County apparently were defined last week when Weaver and Alexander's Walthall 1, located 250 feet north and 240 feet west of center E½ SE 25-6n-1e, bailed salt water and was abandoned at 2464 feet, 11 feet in Midway chalk; elevation was 277 feet. Five-inch OD casing was cemented at 2427 feet. Operators plan to drill another test on the north end of this 80-acre lease which they secured from United Gas Public Service Company.

Florida

Miami, Fla.—Oil Development Company of Florida has landed 490 feet of 12-inch casing on its South Lake well. It now is drilling ahead at 1240 feet with a 11¾-inch hole. The well is in a hard brown lime of Claibourne Age.

Huge Well Extends Eunice Field Over Two Miles South

Hobbs, New Mexico. — Partially explored acreage situated 2¾ miles southeast of the Eunice area scored the banner well of the field Friday when Ohio Oil Company's State-McDonald 3, C NW SE 16-22s-36e, flowed an average of 250 barrels of pipe line oil per hour on two-hour test via barely cracked six-inch valve with drill pipe still in the hole. Production is from regular saturated lime horizon found in the Eunice field, with the hole bottomed at 3816 feet, or 254 feet below sea level. The heavy flow was from the last three feet of hole drilled. Preparations were under way late Friday to snub out the drill pipe and run 2½-inch tubing under pressure to complete the well at its present depth. It will have an allowable of 148 barrels daily.

Ohio Oil Company's big producer is about one-half mile west of the company's State-McDonald 1, SWc NW SW 15-22s-36e, which was completed as a gasser in 1930 after plugging back from sulphur water at 3904 feet to 3866 feet, where three-inch casing was cemented then ripped at 3530-3630 feet last March. This old well was treated with acid after perforating casing near the 3800-foot level, and made 125 barrels oil daily. Production has since dropped to 80 barrels. A dry hole exists about two miles south by west of these two south outpost wells. Texas Pacific Coal & Oil Company, Fort Worth, will be the largest beneficiary, as it holds validated state leases on about 2000 acres situated on a line between Ohio Oil Company's leasehold and the field proper.

Atlantic Oil Producing Company extended production in the Eunice field one location to the north in completing State 1-E, C NE SW 5-21s-36e, flowing 26 barrels per hour through tubing from lime at 3897 feet, or 319 feet below sea level. The field averages more than one mile in width and is eight miles long, and has only one failure to date, with 64 wells on production.

Irregular production performance has been scored by four tests in process of completion in the South Jal field, with one of three offsets failing to show oil or gas in the 3200-foot oil horizon. Gypsy Oil Company's Arnott-State 1-B, NWc SW SW 32-25s-37e, about one third of a mile east of production, swabbed 70 barrels of oil and an equal volume of sulphur water after acid treating lime at 3250 feet, or 266 feet below sea level. It is to be treated with acid again.

Tide Water Oil Company's Coates 1, SEc S½ NW 31-25s-37e, north outpost, showed sufficient oil on drill stem test at 3332 feet, or 332 feet below sea level, to assure a producer, and has cemented casing near the 3270-foot level. Amerada Petroleum Corporation's R. L. Dyer 1, SWc NE Section 31, and an east offset to the above test, failed to encounter oil or gas in drilling to 3335 feet, or 333 feet subsea. Empire Gas & Fuel Company's Dyer 2, a south offset to the latter, showed small volume of gas on drill stem test at 3100-3200 feet, or 207 feet sub-sea, and shut down to cement seven-inch casing at 3100 feet.

Production test given Amon G. Carter et al's G. H. Mattix 1, C SE NW 3-24s-37e, wildcat situated 5¼ miles northeast of the Cooper field, failed to reveal a commercial oil well when the hole was swabbed dry through seven-inch casing cemented at 3407 feet. This wildcat looked promising last week when 2000 feet of oil appeared in the hole from sandy-lime horizons logged between 3508 and 3586 feet. The hole was deepened to 3593 feet late last week and encountered additional oil pay, but not sufficient to make a producer.

An initial flow of 3,000,000 cubic feet of gas, and 10 barrels of sulphur water hourly, was credited to Simms Oil Company's Woolworth 1, C SE NE 35-24s-36e, southeast outpost producer in the Cooper field. Further testing is underway to ascertain if the water can be exhausted, and the well converted into an oil producer, as it occupies a high structural position, with the hole bottomed at a sub-sea depth of 200 feet, or above the average water level of the field. This test encountered difficulties last January when preparing to set pipe on oil pay at 3406 feet, and was plugged back to 1270 feet, making new hole. Seven-inch casing was cemented at 3230 feet, and a short string of 5 3/16-inch pipe at 3430 feet, cutting off heavy flow ot gas in the upper section of the lime.

Repollo Oil Company's W. D. Grimes 2, SWc E½ NW 28-18s-38e, inside location in the Hobbs field, encountered sulphur water in deepening from 4223 to 4268 feet, or 616 feet below sea level, and gauged 40 barrels of oil per hour when plugged back to 4238 feet. It was originally completed in November, 1932, as a small well, and later boosted its potential to 2596 barrels by acid treatment.

Tide Water Oil Company et al's State-Foster 4, C NE NE 8-21s-36e, situated near end of the Eunice field, boosted its flow to 1800 barrels daily, with 5,500,000 feet of gas after second treatment with 3000 gallons of acid solution in lime at 3770-3887 feet. It originally was completed in April making 486 barrels daily after using 2000 gallons of acid.

Cut Bank Production Extension Is Expected

Cut Bank, Mont.—Dakota-Montana Oil Company's Winkler 2, NE NW 26-35n-6w, came in a flowing well in the Cut Bank field, Glacier County, northern Montana this week, and made 260 barrels of oil initial. Total depth is at 2890 feet.

The Texas Company's Sherburne Mercantile 1, CNW SW 10-34n-6w, on patented land in the Blackfeet Tribal reservation, was a disappointment when it swabbed in for 60 barrels in the first 24 hours. The well drilled to 2982 feet.

Two wells started in the field this week, bringing total operations to 30. The Texas Company is building derrick for Marrie Haggerty 1, CSE NE 9-34n-6w, a well on Blackfeet land.

Santa Rita Oil & Gas Company's Fisk 1, CSW SE 14-35n-6w, is spudding at 100 feet.

Extension of the field three miles to the southwest is expected, as the Gardner-Smith Syndicate's Tweedy 1, NEc 36-33n-6w, an outpost test, is drilling at a critical depth of around 2700 feet. The well is checking approximately 200 feet higher than the nearest producers in the southern sector of the field, and geologists are of the opinion that the well has good possibilities of encountering commercial production.

Byron Field

Byron, Wyo.—Ohio Oil Company is digging cellar for Byron-Union 4, SW NE 22-56n-97w, a first report in the Byron field, here, Big Horn County, northern Wyoming. Byron-Union 3, NW NE 22-56n-97w, is rigging rotary. Sidon Canal 2, southwest corner Lot 40, Section 24-56n-97w, is drilling shale at 3495 feet. In the same field, Taylor Oil Company and S. H. Keoughan's Hoskins 1, SE SE 25-56n-97w, is redrilling at 4850 feet after cementing off lost drill stem with old total depth at 5270 feet. Hole was cemented back to 4750 feet.

Wyoming Wildcat Makes Flow 6360 Barrels High Gravity Oil

Casper, Wyo.—Ohio Oil Company and The California Company's Kyle 1, NE SE NE 26-21n-97w, eight miles south of Medicine Bow, Carbon County, was completed June 7 for 6360 barrels of 63 gravity crude and 81 million feet of gas daily. The gas is coming from the first bench of the Sundance sand at 5151-5222 feet and oil from the second Sundance at 5299-5394 feet. It is the greatest Rocky Mountain area discovery since salt creek.

Daily rains, increasing in intensity from drizzles to heavy downpours and precipitating nearly seven inches of moisture during the past three weeks have brought drilling operations throughout southern Wyoming to a virtual standstill. It is in this portion of the state where several wells most of them Ohio Oil Company operations on Sundance tests are at critical stages.

In the Rock River field, Carbon County, Ohio Oil Company's Harrison-Cooper 10, NE NW SW 35-20n-78w, initial test in the field to the Sundance formation, is likewise waiting on dry weather to move in cementing truck to set the 6¼-inch production string at 3060 feet. The well cored 88 feet of saturated sand in the Sundance, and hole bottoms at 3060 feet. Although cores were heavily saturated with oil in the Sundance at Rock River, gas pressure was insufficient to flow the well on a drill stem test. It is believed the well will make a good pumper. The company meantime has announced intention of deepening Diamond Cattle 4, SW NW 35-20n-78w, from 2822 feet in the Dakota to the Sundance.

In the Lance Creek field, Ohio Oil Company's Lamb 6, SE SE 36-36n-65w, Niobrara County, is waiting on cementing equipment for the seven-inch production string at 3791 feet in the top of the second bench of the Sundance. The well yielded 60 barrels an hour at 3850-95 feet in the third bench of the Sundance, and a week ago yielded 100 barrels an hour in the second bench at 3788-3832 feet. The well will be produced from both benches, and the drill stem tests indicate that it will make a larger well than the Sundance discovery well in the Lance Creek field, Rholf 2, which completed six weeks ago for 3600 barrels daily.

In the same field, Argo Oil Company's Elliott 3, CNE NE 6-35n-65w, Sundance well, is drilling at 3275 feet, and Continental Oil Company's Schuricht 2, CSE NE 2-39n-61w, another well headed for the Sundance, is waiting to move in rotary tools after building derrick.

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MONTANA

Company, Well and Location	Init. Prod. Bbls.	Depth
GLACIER COUNTY (Cut Bank field)—		
Texas Co., Morrison 2, nw se 22-35n-6w	150	2852
Montana Power Gas Co., Miller 1, nw nw nw 28-33n-5w	350	3078
Olive Oil Co., Winkler 2, se sw 23-35n-6w	20	2875

WYOMING

CARBON COUNTY (Rock River field)—		
Ohio, Harrison-Cooper 10, ne nw sw 35-20n-78w	100	3196
NIOBRARA COUNTY (Lance Creek field)—		
Ohio, Lamb 6, se se 36-36n-65w	4000	3904
ALBANY COUNTY—		
California Co., Holst 1, ne ne se 13-17n-77w	600	3236
BIG HORN COUNTY—		
California Explor, Co., Gaffner 1, csw sw 4-54n-94w	*	1500

NEW MEXICO

SAN JUAN COUNTY—		
Continental, Rattle Snake 44, nw ne nw 12-39n-19w	40	839
LEA COUNTY (Cooper field)—		
Continental-California, R. L. Gates 1-A-26, c sw sw 26-24s-36e	850	3470
Simms, Woolworth 1, c se ne 35-24s-36e	¶3	3474
LEA COUNTY (Eunice field)—		
Continental-California, A. E. Meyer 3-B-9, c se sw 9-21s-36e	2000	3858
LEA COUNTY (Hobbs field)—		
Samedan Oil Co. (J. P. Cusack), Moon-Conoco 1-B, swc½ ne¼ 28-18s-38e	6869	4215

*Failures; †Junked; ¶Mil. cu. ft. gas.

Two Locations Announced at Iles

Craig, Colo.—Two new locations were released for the Iles Dome field, Moffat County, northwestern Colorado, this week. Stanolind Oil & Gas Company spotted Parkinson S-D 5, NWc SE 22-4n-92w, and The Texas Company is building derrick for Iles Investment Company 2, NWc NW 23-4n-92w. Stanolind Oil & Gas Company's Shaw S-D 16, SE NW NW 27-4n-92w, is drilling at 3000 feet. The well topped the Dakota at 2748 feet.

Osage Field

Osage, Wyo.—One new well started drilling in the Osage field, Weston County, eastern Wyoming, this week. Updike Brothers are rigging up cable tools for Government 5, CNL NE SW 25-46n-64w. Carl Cundy's Fee 9, NW NW NE 31-46n-63w, is spudding. La-Fleiche Oil Company's Fee 18, CSW SW 17-46n-63w, is drilling at 178 feet, and Dilger & Son's Thierry 1, NW NW SW 32-46n-63w, is rigging up.

Worland, Wyo.—C. L. Brome's Government 3, SW NW NW 31-48n-90w, Hidden Dome field, Washakie County, northern Wyoming, is drilling at 1100 feet.

Kern County May Have Still Another Gas Field

Los Angeles.—Another probable gas field for California is at Kernell in Kern County, where Standard Oil Company's Widgeon 1, Section 1-25-23, with bottom at 3256 feet showed for 6,760,000 feet of gas, with some water. In this hole, 6⅝-inch casing was cemented at 3155 feet and 145 feet of five-inch liner, including 100 feet of perforated, was landed at 3256 feet. Efforts are now being made to shut off the water.

Standard Oil Company is drilling one other well in this area and has rig up for still another. So far only the one company is active in the area, and its acreage under lease is large.

Semitropic Area in Kern County Proven Gas Field

Los Angeles.—The Semitropic area in Kern County has been proven for a new gas field, but the size and its potential value is yet to be determined. During the recent few days, Fullerton Oil Company completed two gas wells in this area.

Fullerton Oil Company's No. 27, Section 14-27-23, was drilled to 2463 feet with 8⅝-inch cemented at 2350 feet. The well tested for 11,800,000 cubic feet of gas. No| 76, Section 1-27-22, has a total depth of 2391 feet and 8⅝-inch was cemented at 2301 feet. It showed for 17,600,000 cubic feet of gas.

Milham Exploration Company is rigging up to start Continental 22-15, Section 15-27-23. Standard Oil Company is drilling two wells and has made locations for four more.

The search for new sources of gas is just as active as is the search for new oil fields. This is especially true for Kern County and points north. The San Francisco area is a large user of gas and the supply is sufficient for the present, but the future supply is another question.

Every Santa Fe Springs Well Is Being Pumped

Los Angeles.—Although the Santa Fe Springs field is producing close to 35,000 barrels, the potential of all wells in the field is estimated at 77,338 barrels a day. Of this total potential, 22,041 barrels are credited to the 183 shut in wells, indicating that the wells on production are capable of producing only 55,000 barrels a day. But no one is convinced the wells could possibly produce this amount, and it is further felt that the so-called shut-in wells could produce anything like 22,000 barrels a day.

This is one of the fields in the state that rumor says will increase its production since the code has been dumped overboard. So far the rumor has been proved without foundation, and doubtless rumors as to other fields in California will prove much the same.

There are no flowing wells at Santa Fe Springs and no well is on the gas lift. All are on the pump. Union Oil Company is the only company in the field that is doing any drilling and its drilling wells are inside locations on a large lease.

For these reasons, it is seriously doubted if the old field would make more than 50,000 to 55,000 barrels a day if every well was pumped to its utmost and if this was done, the water output would be greatly increased.

Deep Test in Sunset Field to Be Abandoned

Los Angeles.—It is expected Michigan Oil Company's No. 1, Section 6-11-23, in the Sunset field, Kern County, will be abandoned. A total depth of 3520 feet was reached, and it was plugged back to 2880 feet and then to 2760 feet, but when formation tester was run, both sand bodies were found to be wet. Last test was at 1800 feet, but without result.

Long Beach East Flank Is Active Area Now

Los Angeles.—Caroline Oil Company has taken over a lease on 32 lots on the east flank of the Long Beach field. An old well which was drilled to 4865 feet but never completed on the lease, will be cleaned out and redrilled to about 5200 feet.

This area is becoming active again, and is said to lie south of the fault. Some fair producers are being completed. Caroline Oil Company plans to drill a total of eight new wells.

Playa del Rey Field to Be Active for Some Time

Los Angeles.—Although two wells on the eastern edge of the Playa del Rey extension of the Venice field refused to flow and compressors had to be used to produce them, a number of good wells in more favorable areas are expected to be completed.

Royalty Service Corporation's Pomoc 1 was completed last week for 2500 barrels of 23 gravity clean oil from 6562 feet, and five are almost ready for production tests.

Total of 24 wells are drilling in the active area and three new ones are al-

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most ready to start. Since one well to an acre is permitted in the field, it is expected several new tests will get under way in June. The wells are drilled below 6000 feet, but the drilling is fairly easy and fast. So far no bad water trouble has been encountered, except on the edge.

So far it is one of the cleanest fields in the state since no storage facilities are permitted in the field and city ordinance forbids the moving of oil by trucks and trailers. It is indicated some of the operators feel the city will relent and permit them to truck out some of their production, since at least three wells are equipped with loading racks.

Voluntary Proration Is Expected in California

Los Angeles.—Whether the proration of oil production will be handled through voluntary measures or under a state law, yet to be acted upon, is an open question in California. Some kind of legal curb is in favor in some quarters, while there is also a very stiff opposition to anything of the kind. In fact, there are so many views as to what any state law should consist of in the way of restrictions and methods of enforcement, until there is little chance of agreement between the various factions.

The California legislature is in session and the assembly has already favorably acted on one control law, but the senate is expected to refuse to give its approval. This bill would set up a commission, members of which would be named by the governor from nominations by oil producers. It provides for an umpire to be the enforcement officer.

The legislature is expected to adjourn soon after June 10 but most of its attention will be given to passing revenue measures, and little time will be given to other matters. The revenue bills are expected to hit the oil industry in several ways. One plan is for a severance tax on oil and gas. Another is to make pipe lines common carriers, requiring publication of rates and certain taxes. Still another would place a heavy state tax on automobiles.

The pipe line common carrier bill, even if passed, would have little real effect, in that the more important lines of the state terminate at isolated deep water points or at large refineries located some distance from built up areas or rail points.

Voluntary control of production is nothing new to California since this is the method used until about two years ago when the federal code came into action. And the control was fairly good. Many think it would work easier now than three years ago, since many operators have become converts to restricted production to market needs. They also realize that a greatly increased production would bring about a deep reduction in crude prices. Present prices will hold with production held to present allowable, even allowing for a reasonable overage.

California Completions

Company, Well and Location	Init. Prod. Bbls	Depth
BUENA VISTA HILLS—		
Standard, No. 119-15D	375	3138
DOMINGUEZ—		
Shell, Reyes 74	950	4568
EDISON—		
Shell, Brown 1	130	3159
FRESNO COUNTY—		
Milham Explor. Co., Oro Loma 1..	*	5802
FRUITVALE—		
Western Gulf, E. West 1	200	3901
KERN COUNTY—		
Hall-Baker Co., DiGiorgio 1	*	1178
MANHATTAN BEACH—		
Bethlehem Explor. Co., Martin 1..	*	7040
MOUNTAIN VIEW—		
Hogan Pet. Co., Wharton 4	4500	5842
SANTA BARBARA COUNTY—		
West Elwood Oil Co., Simond-Campbell	*	3700
SEMITROPIC—		
Fullerton Oil Co., No. 27	¶11.8	2463
No. 76	¶17.6	2391
VENICE—		
Royalties Service Corp., Pomoc 1..	2500	6562
VENTURA AVENUE—		
Associated Lloyd 77	950	5118

*Failures; †Junked; ¶Mil. cu. ft. gas.

Employment in California Oil Industry Increasing

Los Angeles.—After four months of decline, employment in the California oil industry is again on the upgrade, estimates just completed by the California Oil and Gas Association reveal. Employment in May was 51,410, which was 321 more than in April. This figure is made more significant by comparing it with the record low of 41,130 for October, 1931.

Wildcat at Manhattan Beach Dry at 7040 Feet

Los Angeles.—Bethlehem Exploration Company's Martin 1 on the hill back of Manhattan Beach has been abandoned at 7040 feet and equipment is being moved away.

Several times during the drilling of this test, oil sands were found, but proved to be only teasers. Formation testers showed no production. Top of the schist was found at 6906 feet, and top of the conglomerate was picked up at 6741 feet.

Code Abandonment Not To Affect Michigan

Mt. Pleasant, Mich.—Without state control, leading Michigan operators are seeking "cooperation and orderly development and production," as a result of the writing out of the codes by the United States Supreme Court.

Actually, there has been no need for enforcement during the past two years as Michigan operators with but a few exceptions recognized benefits to the state in full observance of code provisions as related to the oil industry.

The State Regulatory Committee, which under the code set up proration limitations, etc., will continue to function in the state, and leading operators anticipate that operations will continue on orderly basis.

An attempt was made in the recent session of the state legislature to pass a state control bill.

Michigan Gas Well Fire Fatal to Three

Mt. Pleasant, Mich. — Eleven men were injured, three fatally, May 29, when Gordon Oil Company's Williams 1 gas test, flowing nine million feet from 1265 feet, caught fire.

W. A. Williamson, 55, of Sistersville, West Virginia; C. P. Trowbridge, driller, 37, assistant drilling superintendent, of Logan, Ohio; and Milton Santee, 35, tool dresser, of Cameron, West Virginia, died from burns. Henry Hegelheimer and Jess R. Mason were badly burned.

The fire was snuffed out with steam June 1 under the direction of H. L. Gentry of Jackson, gas engineer. It is located in Millbrook township of Mecosta County.

Michigan Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ISABELLA COUNTY—		
W. J. Bernier's Gatehouse 1, 15n-6w, c se se-35	*	1590
John Melvin's DeStoop 1, 14n-3w, se se ne-2	35	3025
OGEMAW COUNTY—		
R. F. Ide's Wilcox 1, 22n-2e, nw nw nw-28	20	2690
Muskegon Oil Co.'s Fisk 1, 22n-2e, sec 29	40	2693
MONTCALM COUNTY—		
McClanahan Oil Co.'s Flint 1, 10n-5w, nw nw nw-11	2260	3198
Daily Crude Oil Co.'s Tow 1, 10n-5w, se nw sw-3	740	3198
MECOSTA COUNTY—		
Gordon Oil Co.'s Williams 1, 13n-7w, c sw se-33	¶9	1265
Sherman Drilling Co.'s Scheibe 1, 15n-7w, c nw se-13	¶¼	1272

*Failures; †Junked; ¶Mil. cu. ft. gas.

Second East Flank Failure Slows Crystal Enthusiasm

Mt. Pleasant, Mich.—Failure of a second test in the lower lime beds on the east flank of the Crystal district of Montcalm County has, at least temporarily, killed the play in that direction from the Leonard-Durbin discovery well (10-5w-11).

Mammoth Petroleum Corporation's Dr. Graham 1, 11n-4w-31, Sumner township, Gratiot County, 1½ miles east and one mile north of the discovery, with surface elevation of 777 feet, topped Dundee (?) lime at 3192 feet, picked up salt water at 3216 feet and bottomed at 3220 feet. On the upper sand and lime beds, the test logged virtually with the discovery well but showed a 16-foot drop on the Dundee.

Taggart Brothers, who abandoned Smith 1 (10n-5w-1) a half-mile east of the discovery last week, after drilling into brine in the lower lime, also logged on the upper beds with the discovery but showed a drop of from 20 to 24 feet on the Dundee with the Durbin.

From the start of the Crystal play late in March when the Durbin well initialed 5000 barrels at 3198 feet in lime, operators have been split as to the formation, some calling it Lower Traverse, others Dundee and a few Monroe. However, the majority accept the producing formation as the Dundee, major lime producer in Michigan.

Taggart Brothers abandoned the Smith test but Mammoth Petroleum Corporation plans to pull and re-set five-inch casing through the water lime and deepen.

At least until more light is shed on the eastern and northeastern flanks, development below the gas sands probably will be at a standstill in this part of the area.

Two Producers

Two producers ranging from 2000 to 3000 barrels daily have been completed west of the discovery and a 740-barrel well a quarter-mile north and a quarter-mile west. Tests now drilling are expected to throw considerable light on the trend.

The upper beds as the Marshall, Red Rock, Berea and Traverse in other Central Michigan fields have been recognized as good markers but in the Crystal area these formations have not correlated as well with the Dundee. Tests spread over a four-square mile area on the basis of the upper beds show little variance with the discovery, true on both wells which produced in the lime and the two failures.

Eastern Gulf Oil Company still was attempting to complete Barger 1, 10n-5w-2, north offset to the discovery, this week at 3198 feet, swabbing from 25 to 60 percent water and an average of 30 barrels a day of pipe line oil. The Durbin discovery, which had produced more than 200,000 barrels of oil the first two months, still is producing above 3000 barrels a day, cutting less than one percent water.

Columbia Oil & Gas Company will abandon Davis 1, NE SW-19, Cherry Valley township, Lake County, at 3153 feet, after getting an oil and gas show and water in the Dundee lime. The test originally was drilled to 2998 feet in 1929 by Patterson & Day and abandoned without making a lime test.

Lowell Development Company's Kallinger 1, 7n-9w-35, Kent County, shut down at 2150 feet after a gas and oil showing in the Traverse lime. It probably will be deepened for a Dundee test.

Beaverton Failure

The Beaverton play probably will be hit severely as a result of another test failing to show production or structure. Sun Oil Company's Becker 1, 18n-3w-2, Clare County, topped lime at 4029 feet and showed water at 4085 feet. It probably will be abandoned.

So far of five tests drilled to establish a structure following the Whitehill-Kintner discovery, 17n-2w-11, Gladwin County, three were abandoned as failures, and two others are still testing light oil showings.

Eastern States Completions

KENTUCKY

Company, Well and Location	Init. Prod. Bbls	Depth
HANCOCK COUNTY—		
J. C. Ellis, Smith Hrs 6	75	....
Smith Hrs 11	100	....
OHIO COUNTY—		
Snowden-McSweeney Co., O'Dell 11.	120	....

WEST VIRGINIA

Company, Well and Location	Init. Prod. Bbls	Depth
BOONE COUNTY—		
Boone Coal Co., Boone 2	¶	3093
CABELL COUNTY—		
H. S. Fraley, Pridemore 2	¶	....
J. S. Prodemore & Co., Nida 1	¶	....
J. S. Pridmore & Co., Pridemore 1.	¶	....
DODDRIDGE COUNTY—		
W. D. Gribble, Smith 2	6	....
KANAWHA COUNTY—		
Clyde O&G Co., Shinn 1	¶	4836
Grosscup & Co., Burdette 1	*	....
RITCHIE COUNTY—		
Gillman & Co., Grouser 2	*	1961
A. R. Kelley & Co., Ball 1	2	2046
Clem Morris, Drake 1	¶	2036
ROANE COUNTY—		
K. M. Hunt & Co., Blaker 3	¶	1675
Lattimore 1	6	1610
Murray 1	5	1060
Murray 2	8	....
McIntosh & Norman, McIntosh 1..	15	1764
WIRT COUNTY—		
L. B. Carroll & Co., Ferree 2	¶	1956

SOUTHEASTERN OHIO

Company, Well and Location	Init. Prod. Bbls	Depth
NOBLE COUNTY—		
Harper O&G Co., Harper 3	*	312
MONROE COUNTY—		
Hayes Bros, Wm. Martin 3	*	1663
Andersen & Co., Hogue 2	1	1935
N. T. Stout & Co., L. Gallagher 1..	*	1685
WASHINGTON COUNTY—		
Harry Binegar, Moore 6	*	1967
Swayne-Sewberry, Witcherman 5	2	340
Earl Montgomery, Montgomery 38..	5	1080
W. L. Swingle, Bogard 1	10	1622
McCoy & Co., Hale 7	*	590
Kevin Corp., Foreman 18	*	550

*Failures; †Junked; ¶Mil. cu. ft. gas.

PENNSYLVANIA

Company, Well and Location	Init. Prod. Bbls	Depth
WASHINGTON COUNTY—		
Carnegie Nat. Gas Co., Harvey 1	¶	2774
Carrons 1	¶	865
George Bumgard & Co., Ward 1	*	935

CENTRAL OHIO

Company, Well and Location	Init. Prod. Bbls	Depth
ASHLAND COUNTY—		
Ohio FG Co., Mutchler 1	*	2933
ATHENS COUNTY—		
Gross & Freebault, Variety 2	¶	....
Ohio FG Co., Sunday Creek Coal 119	¶	3685
BELMONT COUNTY—		
Barnesville Dev. Co., Boyd 3	¶	1837
FAIRFIELD COUNTY—		
City Nat. Gas Co., F. A. Ruff 3	¶	2602
GUERNSEY COUNTY—		
Four Leaf O&G Co., Grimes 2	*	1216
Frank Lyons, Gilbert Rch 2	¶	1288
KNOX COUNTY—		
Sterl Brown & Co., Ross 4	4	680
LAWRENCE COUNTY—		
Shale Dev. Co. Wm. P. Booth 1	¶	....
LICKING COUNTY—		
Preston Oil Co., Levingston 1	5	589
Ridgeway & Co., Carter 1	2	618
G. H. Long, Fulton 3	5	706
Utica Gas Co., Shipley 3	*	504
LORAIN COUNTY—		
Schneider & Wyles, Mills 2	*	2495
MEDINA COUNTY—		
Hubert J. Allis, C&W Allis 3	*	538
O. K. O&G Co., Henry Essig 67	10	424
Ohio FG Co., Smith 1	*	3172
Miller & Latshaw, Miller 7	†	....
MEIGS COUNTY—		
Ohio FG Co., Cross 1	¶	1933
Ray Holmes & Co., Holter 1	¶	1919
LeRoy Holmes & Co., Frank Holder 1	¶	1916
Meigs Dev. Co., Elias Jividen 1	¶	1810
Chas. Circle 1	¶	1944
Megis Dev. Co., Circle 1	¶	1952
MUSKINGUM COUNTY—		
H. P. Muhlback, W. D. Burrier 1..	75	3175
H. W. Scott & Co., Wm. Myers 1..	100	3191
PERRY COUNTY—		
Hopewell O&G Co., Kullman 1	¶	3004
STARK COUNTY—		
Ohio FG Co., Stoner 3	¶	4324

*Failures; †Junked; ¶Million cu. ft. gas.

Drilling Reports on Important Wildcats

KANSAS

BARBER COUNTY — Wentz' Skinner 1, cnw ne 29-31s-14w, dr 3018 ft. Southern Drlg. Co. et al's Davis 1, sw se ne 13-34s-15w, dr 3550 ft.

BARTON COUNTY—Lario Oil & Gas Co. et al's Nuss 1, nw sw sw 11-16s-14w, dr 3125 ft. Suppes & Witts' Hayes 1, sw sw sw 6-16s-14w, dr 660 ft. Pryor & Lockhart's Herrington 1, ne ne nw 6-16s-12w, dr 1100 ft. Lario Oil & Gas Co. & McCoy's Dolechek 1, ne nw ne 13-16s-12w, dr 840 ft. Price et al's Ehrlich 1, nw nw se 10-16s-13w, co 838 ft.

BUTLER COUNTY—Ward McGinnes' Jackson 1, sw sw ne 26-25s-8e, dr 1755 ft. Hays & Cameron's Johnson 1, nw nw se 16-26s-6e, dr 1560 ft.

CHAUTAUQUA COUNTY — Central Oil Co.'s Crews 1, ne ne sw 8-32s-12e, dr 1600 ft.

COWLEY COUNTY — Lloyd, Frost & Study's Weathered 1, sw se se 26-31s-3e, so 3088 ft, dr 3200 ft. Baden, Johnson, Roth & Farrout's David 1, ne ne sw 35-30s-4e, spd. Wakefield's Tharp 1, se se ne 10-32s-3e, lcn.

ELK COUNTY—Hicks et al's Lewis 1, sw se se 35-31s-10e, dr 500 ft. Griffin & Bell's Silger 1, ne se se 25-30s-10e, td 1320 ft, pumped 36 bbls oil.

ELLIS COUNTY—Palmer's Ruder 1, se ne nw 17-15s-18w, dr 1134 ft. Stanolind Oil & Gas Co.'s Penny-Wann 1, nw sw se 12-15s-20w, soc 85 ft.

ELLSWORTH COUNTY—Lario Oil & Gas Co. et al's Central National Bank 1, se se nw 33-15s-8w, dr 2340 ft. Lario Oil & Gas Co. et al's State 1, sw sw sw 29-15s-8w, dr 3550 ft. Western Exploration Co.'s Wilkins 1, nw sw nw 9-17s-9w, running 10-in cas 1805 ft.

GRAHAM COUNTY—Helmerich & Payne et al's Stites 1, csw sw 8-10s-22w, rur.

HARPER COUNTY—Kessler & Their et al's Wolfje 1, sw sw ne 17-33s-6w, mim.

HARVEY COUNTY—Twin Drilling Co. et al's Ruth 1, sw sw sw 16-22s-2w, ur 6-in csg 3275 ft. Goering Brothers et al's Brainard 1, ne ne sw 3-23s-2w, fsg 1320 ft. Cameron, Derby & Trees' Brainard 1, sw se nw 17-24s-2e, dr 2695 ft. Winkler-Koch et al's Mueller 1, se sw nw 15-23s-2w, dr 1045 ft. Lauck et al's Baller 1, sw sw sw 29-24s-1e, dr 3013 ft.

McPHERSON COUNTY — Palmer Oil Corp.'s Swenson 1, ne ne sw 11-18s-3w, hfw, sd 3645 ft. Shell Pet. Corp.'s Wenger 1, ne ne ne 2-20s-1w, sd for pipe line. Washabaugh et al's Berg 1-A, sw sw ne 15-20s-3w, mim.

NESS COUNTY—Phillips Pet. Co.'s Young 1, cnw sw 13-18s-21w, co 4008 ft.

OSAGE COUNTY—Jim Edwards Deitrick 1, cnw se 21-14s-15e, sd 800 ft.

RENO COUNTY—Mylius et al's Sprowl 1, ne nw ne 1-24s-5w, hfw 3425 ft, running 6-in csg 3565 ft. Gypsy Oil Co.'s Tonn 1, sw nw se 16-25s-4w, woc 3581 ft. Haynes Brothers et al's Mueller 1, se se nw 30-24s-4w, woc 196 ft.

RICE COUNTY—Vickers Pet. Co. et al's Gouldner 1, se ne nw 16-18s-9w, gas 2995-2999 ft, sd 3020 ft. Day's Mason 1, nw ne ne 28-21s-7w, sd 2400 ft. Anderson & Kerr et al's Lackey 1, ne ne nw 13-21s-6w, rur. Anderson & Kerr's Wernet 1, nw nw nw 24-20s-6w, lcn. Detrick et al's Monroe 1, cne ne 9-20s-7w, lcn. Detrick et al's Conner 1, cne ne 28-19s-7w, lcn.

ROOKS COUNTY—Trees Oil & Findeiss' Johnson 1, sw sw se 26-10s-19w, sd 1196 ft. Murfin et al's Wathusin 1, ne ne se 19-9s-16w, rig.

RUSH COUNTY—Twin Drilling Co. et al's Appl 1, sw sw ne 29-17s-17w, mim. Boyle & Grossman et al's Yost 1, csw sw 23-17s-18w, dr 2460 ft. El Dorado Ref. Co.'s Stang 1, se se nw 36-17s-17w, dr 1945 ft. Lario, Madison & Hewitt's Gillig 1, ne se nw 24-17s-17w, mim. Ramsey Petroleum Co. et al's Darkes 1, sw sw nw 5-17s-20w, rig.

RUSSELL COUNTY—Wolf Creek et al's Penn Mutual 1, sw sw sw 22-15s-15w, ur 8-in csg 2880 ft. Ryan Pet. Co.'s Newbold 1, nw se ne 25-12s-15w, dr 3190 ft. Pryor & Lockhart's Spicer 1, ne ne se 21-11s-15w, ru. Wakefield & Armer's Hall 1, ne se sw 35-14s-15w, fsg 2910 ft. Buffalo Oil Co.'s Kunz 1, ne ne sw 19-14s-18w, cellar. Vernon & Murphin's Becker 1, ne ne ne 32-15s-14w, dr 2200 ft. J. Brouk & R. D. Bailey's Kluesner 1, nw nw se 34-15s-12w, sd 325 ft. Murfin et al's Gorham Estate 1, ne ne se 29-14s-15w, cellar. Winkler-Koch et al's Herman 1, se se nw 27-12s-15w, dr 600 ft.

SCOTT COUNTY—Atlantic Oil Co.'s Mark "A" 1, cse se 28-20s-33w, core 4744-4756 ft, sg running Halliburton test.

SEDGWICK COUNTY — Western Kansas Oil & Ref. Co. et al's Betzen 1, se se ne 17-16s-13w, td 4765 ft, D&A. Derby Oil Co. et al's Bartholomew 1, sw sw nw 8-27s-4w, sd 30 ft.

STAFFORD COUNTY—Davis et al's Riley 1, se se se 19-22s-11w, dr 2765 ft. Empire Oil & Ref. Co.'s Grove 1, ne ne nw 5-22s-11w, dr 1395 ft. Helmerich, Payne & Newbold's Geisler 1, nw nw se 28-22s-12w, dr 500 ft.

SUMNER COUNTY — Allison & Fitzwilliams et al's Hitchcock 1-B, se se nw 16-30s-1w, dr 200 ft. D. J. Wilson's Clark 1, csl nw 15-35s-1w, sd 1000 ft.

TREGO COUNTY—Jenmar Oil Co.'s Jones 1, se se se 30-12s-23w, dr 4150 ft.

WOODSON COUNTY—Foster & Schultz' Ferguson 1, cs½ ne sw 12-26s-13e, td 1540 ft, D&A.

OKLAHOMA

ATOKA COUNTY—Pierce et al's Aetna Life Ins. 1, nw sw ne 10-1n-13e, rig.

BRYAN COUNTY—C. B. Welch's Collins 1, sw sw nw 19-8s-8e, sd 570 ft. Trio Oil Co.'s Gilbert 1, se se se 25-8s-7e, sd 603 ft.

CADDO COUNTY—Denver P. & R. Co.'s Sah-Cam 1, cse se 33-10n-10w, td 6450 ft, dr pipe stuck. H. W. Lee et al's Horton 1, ne ne ne 9-6n-13w, rust and sd.

CANADIAN COUNTY—Carl Larkin's Provene 1, nw nw ne 33-13n-5w, dr 6805 ft.

CARTER COUNTY—Carter Oil Co.'s Humble-Williams 1, sw ne sw 27-2s-3w, dr 6004 ft. Waco Turner's Munson 1, ne nw ne 35-5s-2w, co 3650 ft, td 3856 ft.

CLEVELAND COUNTY—Sinclair Prairie Oil Co.'s Franklin Community 1, se nw se 21-10n-2w, sso& g 7268-7291 ft, testing.

COAL COUNTY—Carter Oil Co. et al's John Thompson 1, csl ne nw 34-2n-9e, mir. Amerada Pet. Corp. & Stanolind O&G Co. et al's Travelers Life Ins. 1, sw nw se 28-1s-9e, lcn.

COMANCHE COUNTY — F. F. Stevens' Green 1, se se sw 2-1n-13w, sd 1600 ft.

GARVIN COUNTY—Chas. E. Carter et al's Wood 1, nw sw se 5-4n-3e, sd 2405 ft.

GRANT COUNTY — Helmerich - Payne's Crouse 1, cne sw 29-25n-8w, fsg bit 6212 ft.

GREER COUNTY—Ent & Camp's Simington 1, sw sw se 29-5n-21w, sd 50 ft. Gled Oil Co.'s Leeker 1, se se se 5-4n-21w, dr 1460 ft. Fred Morgan's Carder 1, csw se 19-4n-22w, dr 2680 ft. Rockwell et al's Stephens 1, csl se 32-6n-24w, mach.

HARMON COUNTY—Mathis' Keith 1, se nw sw 12-5n-26w, rig timbers.

HUGHES COUNTY—Freeman et al's Kite 1-A, nw nw ne 8-6n-10e, sd 700 ft. Dandridge & Crane's Mead 1, nw nw ne 17-5n-9e, dr 1524 ft. The Texas Co's Keaton 1, nw nw sw 4-8n-10e, cored 3732 ft. Caprock Oil Co.'s Parks 1, sw sw se 34-7n-8e, lcn.

JACKSON COUNTY—Palo Duro Oil Co.'s Ealum 1, se se sw 15-2n-21w, sd 1080 ft. Buell et al's Kizzar 1, se se ne 2-2n-22w, dr 2148 ft. Gypsy Oil Co.'s Boucher 1, nw sw nw 32-1n-19w, ur 6¾-in csg 2032 ft, 1500 ft water. Marshall & Burnham's Hess 1, ne ne sw ne 27-1s-20w, sd 1160 ft. Associated Oil Co.'s Harrell 1-A, ne ne se 13-1s-21w, dr 700 ft. Robberson & Suppes' Walker 1, sw sw sw 19-4n-20w, sd 750 ft. Burk Greis Oil Co.'s Milbrant 1, sw nw sw 31-3n-19w, dr 780 ft. Selby Oil & Gas Co.'s Mack 1, nw nw sw 5-2n-20w, dr 1460 ft. Triangle Prod. & Ref. Co.'s Fox 1, cnl se sw nw 11-3n-20w, skid rig 40 ft south, dr 30 ft.

JEFFERSON COUNTY—Gypsy Oil Co.'s James 1, sw se se 30-6n-6e, dr 1882 ft. Ben Levy et al's Ryan 1, nw nw nw 16-6s-6w, set 10-in csg 35 ft, to dr out and cement.

KAY COUNTY — Lindsay's Waggoner 1, nw nw ne 3-27n-1e, td 835 ft, fighting cave. Marshall & Haddock et al's Hermes 1, sw sw nw 6-26n-4e, rum.

KIOWA COUNTY — Hensen & Patton's Beeler 1, ne ne ne 11-6n-15w, td 517 ft, D&A.

LEFLORE COUNTY—McGraw et al's Tidwell 1, cnw se 17-3n-22e, rog.

LINCOLN COUNTY—Carlock's Young 1, cn½ nw nw 23-15n-5e, spd and sd. Stanolind Oil & Gas Co.'s Cavanaugh 1, se se ne 31-5n-5e, td 3570 ft, pb 3550 ft, bailing. The Texas Co.'s Palmer 1, se sw nw 28-14n-5e, woc. Wilcox Oil & Gas Co.'s Connelly 1, se ne se 23-14n-2e, lcn.

LOGAN COUNTY—Sinclair Prairie Oil Co. & Slick-Urschel's Koatsch 1, sw sw sw 23-15n-3w, cored 6332-6340 ft, dr out to 6341 ft, cored 6341-6343 ft, bailing. J. C. Shaffer's Hammond 1, se se sw 10-15n-4w, sd 7100 ft. Anderson-Kerr et al's Renfro 1, ne ne ne 33-16n-4w, sd 7009 ft. Mid-Continent's Community Nunn 1, se se nw 25-15n-1e, dr 4840 ft. Freeland et al's Scrutchfield 1, nw nw ne 9-16n-1e, dig cellar.

MAJOR COUNTY—I. T. I. O. Co. & Continental Oil Co.'s Fairview 1, csw se 32-23n-14w, dr 2050 ft.

MARSHALL COUNTY—Schermerhorn Oil Co.'s Rich 1, sw se se 35-4s-4e, so&g 490-495 ft, testing.

MURRAY COUNTY—Equitable Oil & Gas Co.'s Ferguson 1, ne ne sw 26-1s-3e, dr 940 ft. Bland et al's Center 1, ne ne ne 6-4s-2e, ru and sd. Hernsby & Jones' Sadler 1, ne ne nw 20-1n-2e, lcn.

OKLAHOMA COUNTY—Gypsy Oil Co.'s Schock 1, nw sw sw 2-14n-3w, pb 6315 ft, taking dr stem test. Sinclair Prairie Oil Co.'s Corbett 1, ne nw ne 17-13n-3w, dr 5335 ft. Slick-Urschel et al's Owen Community 1, se se se 19-13n-3w, dr 6435 ft. Gypsy Oil Co.'s Salisbury 1, nw ne ne 13-14n-4w, cellar.

PAWNEE COUNTY—Trees Oil Co.'s Susan Wedd 1, cse se 27-24n-5e, sd 3207 ft. Stano-End Oil & Gas Co. et al's Shumatana 1, ne sw se 32-22n-3e, br.

PONTOTOC COUNTY — Paramount Oil Co.'s Graham 1, sw se sw 13-1n-7e, td 3478 ft, D&A. Fleetborn Oil Corp.'s Oliver 1, ne nw se 21-4n-5e, td 2229 ft, pb 1665 ft, ru. Phillip

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

* —*dry hole abandoned well.*
‡ —*salt water (completions).*
† —*junked and abandoned*
¶ —*million feet of gas.*
abd —*abandoned.*
bbls —*barrels.*
br —*building rig.*
b.s. —*basic sediment.*
csg —*casing.*
co —*cleaning out.*
dd —*drilling deeper.*
dk —*derrick.*
dr —*drilling.*
fsg —*fishing.*
ft —*feet.*
hfw —*hole full of water.*
in —*inches.*
lcn —*location.*
m —*milling.*
mim —*moving in materials.*
mit —*moving in tools.*
mot —*milling on tools.*
n, s, e, w, —*north, south, east, west.*
oih —*oil in hole.*
owdd —*old well drilling deeper.*
owpb —*old well plugging back.*
pb —*plugged back or plugging back.*
r —*reaming.*
rog —*rig on the ground.*
rur —*rigging up rotary tools.*
rust —*rigging up standard tools.*
sd —*shut down.*
sdtr —*sidetracking.*
sg —*show gas.*
si —*shut in.*
so —*show oil.*
so & g —*show oil and gas.*
spd —*spudding.*
sr —*straight reaming.*
sw —*salt water.*
td —*total depth.*
ur —*underreaming.*
wih —*water in the hole.*
wo —*workover.*
wocs —*waiting on cement to set.*
wosr —*waiting on standard rig.*

Boyle's McCracken 1, ne nw nw 3-15n-4e, ru mach. Leonard Williams et al's Breedon 1, nw nw nw 6-2n-5e, spd and sd. Southern Oil Co.'s Walker 1, nw nw sw 11-4n-6e, dr 1420 ft.

PUSHMATAHA COUNTY—William Ungerman's Messer 1, se sw sw 35-3s-18e, dr 3110 ft.

SEMINOLE COUNTY—Cooper's Chandler 1, ne se sw 4-5n-6e, sd 1780 ft. Tom Phillips et al's Abbott 1, ne ne ne 33-8n-7e, dr 2680 ft.

STEPHENS COUNTY—Wm. Angle et al's Cooper 1, ne nw nw 23-2n-7w, sd 3406 ft. Geo. Pace et al's Daily 1, ne ne ne 26-1n-8w, set 10-in csg 53 ft, woc.

TILLMAN COUNTY—Laper et al's Conrad 1, ne ne ne 35-1s-19w, dr 1660 ft. Rock Island Ref. Co.'s Lynch 1, cse sw 35-1s-16w, sd 310 ft, crooked hole. Cockburn & Boose's Nichols 1, se se se 28-2n-19w, sd 3022 ft.

WASHITA COUNTY—McWhirter et al's Fee 1, sw sw sw 34-8n-19w, dr 400 ft.

WYOMING

CARBON COUNTY—Ohio and California Co.'s Kyle 1, ne se ne 26-21n-97w, running tubing to test 5393 ft. Earl W. Reeder, Inc.'s Whitford 1, sw se ne 24-20n-84w, dr by bailer 4365 ft.

CONVERSE COUNTY—Chaderon Osage Co.'s State 1, cne 16-32n-69w, dr 800 ft.

BIG HORN COUNTY—Yale Oil Corp.'s Blakesly 1, ne ne nw 28-49n-91w, dr 1800 ft. Thomas & Walker's Keachie 1, sw sw 18-59n-81w, rigging up. Wyo. O&R Co.'s Evans 1, ne ne nw 12-49n-91w, dr 350 ft.

FREMONT COUNTY — Monongahela Oil and Keoughan's Wisda 1, ne se se 13-28n-93w, dr 3000 ft.

NIOBRARA COUNTY—Shogren & Hultgren's Olinger 1-A, se ne nw 1-36n-63w, dr 1500 ft.

WASHAKIE COUNTY—Wyo. O&R Co.'s Frison 1, nw sw nw 14-48n-91w, dr 1700 ft.

WESTON COUNTY — Beaver Creek Oil Syndicate's State 1, ne ne 23-44n-63w, rigging up.

MONTANA

CHOTEAU COUNTY—Decker et al's Mills 1, ne ne 29-27n-13e, spudding.

GALLATIN COUNTY—Montana G&P Co.'s Tice 1, nw nw nw 28-1s-2e, dr 1425 ft.

FERGUS COUNTY—H. C. Rollings Woodward 1, se se sw 20-14n-24e, dr 3110 ft.

LIBERTY COUNTY—A. H. Hamilton's Northern Farms 1, cne sw 10-37n-5e, dr 2735 ft.

PHILLIPS COUNTY—Grant Smith's Phillips 4, e½ nw sw 2-24n-23e, dr 516 ft. Guy Norman's Pewitt 1, ne nw ne 20-24n-24e, dr 705 ft.

PETROLEUM COUNTY—Hardendorf & Keyes' Austad 1, sw nw se 22-13n-28e, rigging up.

ROSEBUD COUNTY — Birny Oil & Gas Co., Fee 1, sw sw sw 6-6s-42e, dr 400 ft.

STILLWATER COUNTY — Continental's Orr 1, sw nw se 18-5s-17e, resuming 400 ft.

TOOLE COUNTY—Fraser, Kluth's Severance 1, cse ne 29-32n-2e, dr 1200 ft. Kyle et al's Clark 1, nw se 24-37n-1e, dr 1037 ft.

COLORADO

BACA COUNTY—J. H. Evert's test 1, nw nw nw 24-32s-48w, spudding.

BOULDER COUNTY—Leslie R. Steele's Maxwell 1, sw ne nw 42-1n-71w, straightening crooked hole after plugging back from 917 ft to 895 ft.

ARCHULETA COUNTY — Oil City Pet. Co.'s Garnett 2, nw ne sw 25-33n-2e, dr 1090 ft.

GRAND COUNTY—Colo. O&R Co.'s Linke 1, ne sw sw 13-1n-77w, cleaning out to bottom at 1820 ft.

JACKSON COUNTY — Colo. O&R Co.'s North Park Coal 1, cnw nw 18-9n-78w, resuming 1805 ft.

PARK COUNTY — South Park Oil Co.'s State 1, ne se sw 16-11s-75w, lowering 10-inch csg to bottom at 1415 ft.

PROWERS COUNTY—Trogan O&G Co.'s Louts 1, nw ne ne 15-23s-46w, dr cement after cementing off shale caves at 4965 ft, td 5527 ft.

NEW MEXICO

BERNALLILO COUNTY—Norrins Realty Co.'s Gallegas Grant 1, cne ne 19-11n-4e, dr 520 ft.

CHAVES COUNTY—Warman Oil Trust's Hoar 1, nw se 9-14s-25e, dr 1600 ft.

EDDY COUNTY—Geo. F. Getty Oil Co.'s Andrew Dooley 7, swc nw 24-20s-29e, 6000-ft test, elev 3309 ft, dr 5290 ft.

LEA COUNTY—Amerada's Andrews 1, c nw nw 12-20s-36e, Monument area, lcn. Anderson-Prichard Oil Corp.'s Britt-Conoco 1, c se nw 7-20s-37e, Monument area, bldg road; Fisher 1, c se ne 8-20s-35e, elev 3690 ft, top anhydrite 1945 ft, top salt 2000 ft, dr 3675 ft. Amon G. Carter et al's G. H. Mattix-Conoco 1, c se nw 3-24s-37e, elev 3528 ft, top anhydrite 1090 ft, top salt 1225 ft, top brown lime 2547 ft, sandy-lime oil zone 3508-3586 ft, tested 2000 ft oih, cemented 7-in cas 3407 ft. R. H. Henderson et al's P. J. Langley 1, c se se 8-25s-37e, elev 3162 ft, top salt 1205 ft, making gas, lost 2 strings tools, td 2875 ft, set whipstock. Humble's J. L. Coates 1-A, nw ne 10-24s-36e, elev 3385 ft, top anhydrite 1324 ft, top salt 1433 ft, sd 3394 ft. Jeffers Oil Co. (R. H. Henderson's) C. M. Carlson 1, c nw se 27-25s-37e, sd 390 ft; A. N. Etz-Conoco 1, c ne sw 12-21s-32e, elev 3813 ft, top anhydrite 1560 ft, dr salt 2680 ft; Jiminez-Conoco 1, c sw se 11-20s-33e, elev 3603 ft, sd repairs 1560 ft. Maljamar O&G Corp.'s P. Miller 1, c nw se 23-17s-32e, elev 3992 ft, top anhydrite 790 ft, top salt 955 ft, s&f 90 bbls oil at 3980-86 ft, dr 4115 ft. Nat'l Securities Oil Corp.'s V. Linam 1, nec s½ sw 33-18s-37e, elev 3712 ft, top anhydrite 1580 ft, logged salt 1716-2650 ft, top lime 2956 ft, pb fr 4506 ft to 4238 ft, sdo. Ohio's State-McDonald 3, c nw se 16-22s-36e, elev 3562 ft, top anhydrite 1450 ft, top brown lime 3060 ft, tested 3,000,000 ft gas 3675-3739 ft. Rowan Drlg. Co.-N. G. Penrose's E. M. Elliott-Conoco 1, c ne sw 17-22s-37e, elev 3400 ft, top anhydrite 1070 ft, pb fr sulphur w in lime at 4077 ft, to 3760 ft, lowered 3-inch tubing to 3754 ft and swabbed dry, no oil or

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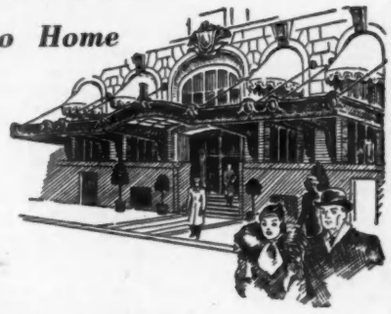

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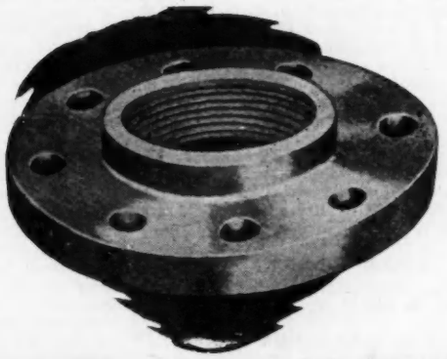

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HOUSTON, TEXAS

gas. Shell Pet. Corp.'s State 1-E, c se se 35-19s-36e, Monument field, elev 3594 ft, dr 3630 ft. Sun's W. B. Maveety 1, c ne se 35-19s-36e, Monument field, rig. Superior Oil Co. (Cal.s') State 1, c ne ne 2-20s-36e, Monument field, elev 3596 ft, dr 1010 ft. Texas Co.'s Saunders 1, c se sw 18-19s-37e, Monument field, elev 3693 ft, top anhydrite 1288 ft, dr 2980 ft. W. L. Todd and Texas Co.'s Fred Cole 1, c ne ne 35-19s-33e, elev 3603 ft, top salt 1540 ft, top white lime 3250 ft, sulphur w at 3513-18 ft, sr at 3620 ft, td 3832 ft.

McKINLEY COUNTY—R. W. Sanderson et al's Red Mountain 1, ne sw 21-20n-9w, rust.

OTERO COUNTY—Flinn, Welsh & Yates Donohue 1, cnw ne 28-24s-15e, dr 1465 ft.

UNION COUNTY — Sierra Grand Oil Corp.'s Rogers 1, cne sw 4-29n-29e, dr 2050 ft.

CALIFORNIA

KERN COUNTY

ARVIN—General's Mattson 1, 1-32-29, dr sand and boulders 4446 ft. Hall-Baker Co.'s Core hole 4-4, 16-31-30, trying to pump, 1270 ft Di Giorgio 1, 17-31-30, abn in granite 1178 ft.

BELRIDGE—Continental's Maylan 1, 7-28-20, dr sandy shale 4761 ft.

BUENA VISTA LAKE—Shell's B. V. A. 1, 9-32-25, dr silt, poor gs, 6660 ft.

CALIENTE CREEK—Hutcheson & Osborne's O & H 1, 32-30-30, rur. Woodward Oil Co.'s Batz 1, 36-29-29, dr sand 680 ft. Jameson 1, 36-29-29, dr sand 560 ft; Wirth 1, 36-29-29, dr sand 453 ft.

COMANCHE POINT — Tejon Ridge Oil Co.'s No. 1, 23-32-29, sd 1942 ft.

DEVIL'S DEN—Amerada's Beer 3, 17-26-19, spud June 1.

GRAPEVINE—Silver Gate Co.'s Tejon 1, 7-10-19, dr hard sand 460 ft.

GREENFIELD—Big McKittrick Oil Co.'s Houghton 1, 7-31-28, dr shale 6640 ft.

KERNELL—Standard's Rideout 1, 34-24-23, rig; Widgeon 1, 1-25-23, td 3256 ft, made 6,700,000 cu ft gas, spray water, trying to locate water; Widegon 2, 12-25-23, coring blue shale 3173 ft.

LOST HILLS—Standard's United 1, 2-26-20, rigging up to dr deeper, 4143 ft.

SEMITROPIC—Fullerton Oil Co.'s No. 27-9, 9-27-23, rur; No. 72, 26-27-23, rur. Milham Explor, Co.'s Continental 22-15, 15-27-23, rur. Standard's H & C 1, 9-27-23, rur; C L D S 1, 1-27-22, lcn; Goldman 1, 5-27-23, coring 3154 ft; Smith Fee 1, 9-27-23, cellar; Towle Est. 1, 7-27-23, spud May 28; West Gulf 1, 8-27-23, lcn.

SOUTH DOME—Continental's Gatchell 28-7, 7-25-20, coring hard shale fine sand 6380 ft.

TEMBLOR HILLS—Robt. Foster's No. 1, 2-32-22, dr brown shale 2974 ft.

WHEELER RIDGE—Reserve O&G Co.'s Tejon Ranch 1, 2-10-19, td 3708 ft, wet, plugging back.

KINGS COUNTY

ALPAUGH—Trico O&G Co.'s Magee & Stone 3, 36-24-22, sd 4821 ft.

MISCELLANEOUS

FRESNO COUNTY—Milham Explor. Co.'s Oro Loma 1, 12-12-11, abn 5802 ft. Russ Oil Syn.'s No. 1, 28-12-11, sd 5115 ft. Taft Well Dr. Co.'s Kreyenhagen 1, 33-22-16, dr sand and shale 2058 ft.

HUMBOLDT COUNTY—Texas Co.'s Eureka 1, 1-3-2, dr sandy shale 6060 ft.

SACRAMENTO COUNTY—Great American Pet. Co.'s Howard 1, 25-2-8, dr hard gray sand 2957 ft.

SAN JOAQUIN COUNTY — Amerada's F.D.L. 1, 15-2-5, dr shale 5140 ft.

TEHAMA COUNTY — Northern Counties Pet. Co.'s Ewers-Mooney 1, 25-24-3, coring sandy shale 4265 ft.

TULARE COUNTY—Kabella Oil Co.'s No. 1, 12-23-27, in granite 775 ft. Kings River Oil Pool's No. 1, 29-16-23, sd 3160 ft.

MONTEREY COUNTY

WEST PLEYTO—Shell's Branch 1, 34-24-10, dr sand and shale 2238 ft.

SANTA BARBARA COUNTY

GOLETA—West Elwood Oil Co.'s Simonds-Campbell 1, 9-4-28, abn 3700 ft, 6⅝-in at 3600 ft.

LOMPOC—M. J. Freeman's LaBrea 1, 11-7-33, dr shale 810 ft. Lompoc Pet. Co.'s Beauterbough 2, 18-7-34, td 3515 ft, ran 4¼-in to 3380 ft; 2½-in tubing to 2550 ft, swabbed, flowing 3000 bbls hot salt water, to let flow for a few days.

NAPLES—Scully & Snyder's No. 1, 7-4-29, sd 6445 ft.

SANTA BARBARA—M & L Oil Co.'s Domerick 1, 29-4-27, sd 2020 ft.

VENTURA COUNTY

BARDSDALE—El Rancho Oil Co.'s Elkins 1, 9-3-19, sd 1083 ft. Union Oil Co.'s Dryden 1, 12-3-20, dr os and shale 2545 ft.

CONEJO — International Oil Developers' Powell 1, 33-2-20, td 3060 ft, pumping, rods parted.

HOPPER CANYON—Oil Ridge Oil Co.'s Moran 3, 1-4-19, dr 1635 ft.

LAS POSAS—Las Posas Pet. Co.'s Mahan 1, 22-3-20, fsh 8120 ft.

PIRU—Bachman Pet. Co.'s No. 14, td 5050 ft, to set 6⅝ in casing.

SANTA PAULA — High Mesa Oil Co.'s Butcher 1, 16-4-22, dr shale 643 ft. Edw. M. Lesperance's Boosey 1, 31-4-20, dr sand and shale 1975 ft.

SANTA SUSANA — American Drlg. Co.'s No. 11-A, 31-3-17, sd 550 ft to drop from report.

SESPE—Bankline Oil Co.'s No. 1, 36-5-20, lcn, grading roads. E. R. McClellan's No. 1, 4-4-19, rig. Sullivan & Roberts' No. 2, 28-5-19, lcn. grade. Supreme Oil Co.'s No. 1, 1-4-20, dr 200 ft.

SHIELLS CANYON—Henry R. Dabney's McGuire 1, 2-3-19, rig. The Texas Co.'s Shiells 128, 4-3-19, dr hard sand and shale 6862 ft.

SIMI—Dawson Oil Co.'s No. 1, 8-2-17, sd 1910 ft. Paloma Oil Co.'s Paloma-Marr 1, 12-2-18, sd 1050 ft.

SOUTH MOUNTAIN—Calco Pet. Corp.'s No. 2, 17-3-20, dr sand 1412 ft.

SOUTHERN CALIFORNIA

ARTESIA—Vanco Dev. Co.'s Millard 1, 25-3-12, dr shale streaks sand 4310 ft.

BANDINI—West American Oil Co.'s Bandini 1, 17-2-12, wocs 14in 1060 ft bottom. Western Gulf Oil Co.'s Vail 1, 16-2-12, coring sand and shale 4720 ft.

EL SEGUNDO—Republic Pet. Co.'s No. 1, 18-3-14, sd 5004 ft.

HUNTINGTON BEACH—Black Eagle Oil Co.'s No. 1-B, permit 194, 32-5-11, sd 4702 ft.

NEWPORT—Si Rubens' Newport 1, 14-6-10, sd 2574 ft. Wilshire Oil Co.'s Newport 1, 29-6-10, dr hard brown shale 750 ft.

PICO—Frontier Oil Co.'s No. 1, 12-2-12, sd 3760 ft.

SAUGUS—Barstow Oil Co.'s Walker 1, 35-5-16, sd 4042 ft. International Oil Developers' Powell 1, 34-5-16, td 4339 ft, plug 1700 ft, testing Powell 2, 34-5-16, lcn.

SAN BERNARDINO COUNTY — Great American Pet. Co.'s Gapco D-1, 18-2-8, dry gray sand 910 ft.

SAN DIEGO COUNTY—E. A. Hargrave's No. 1, 29-15-3, sd 2500 ft. Will drop from report. San Diego Gas & Pet. Corp.'s No. 1, 32-18-2, td 6332 ft, pumping 275 bbls fresh water.

MICHIGAN

MIDLAND COUNTY—Goll, Graves, Mechling's Oviatt 1, 16n-2e, 24, sd 3300 ft. Atha Oil Co.'s Moran 2, 13n-1e-28, dr 1000 ft. Brehm and Hollman's Gould 1, 15n-2w-19, sp.

ISABELLA COUNTY — McClanahan Oil Co.'s MacRae 1, 15n-3w-13, dr 450 ft; Currie-McKenzie 1, 16n-4w-34, owdd 1392 ft, ru. United Driller's Vandercook 1, 13n-3w-24, dr 2700 ft. Atha Oil Co.'s Fordyce 1, 16n-5w-13, sp.

OGEMAW COUNTY — Thompson Bros.' Mills Estate 1, 21n-4e-31, dr 2550 ft. Durham & Jone's Farro 1, dr 1500 ft.

GLADWIN COUNTY—Beaverton Oil and Gas Co.'s Ross 1, 17n-1w-7, sd 3790 ft. Sun Oil Co.'s Hines 1, 17n-1w-31, testing 3998 ft. Strange Oil and Gas Co.'s Spicer 1, 17n-2w-11, dr 1950 ft.

CLARE COUNTY—Sun Oil Co.'s Becker 1, 18n-3w-2, Dundee 4029 ft, water 4085 ft, sd 4090 ft. Farwell Oil and Gas Co.'s Siegel 1, 17n-5w-26, dr 790 ft. T. K. Buzard's Newell 1, 17n-3w-19, lcn.

MECOSTA COUNTY — Jetter Oil Co.'s Parsley 1, 14n-10w-19, dr 3100 ft. Jasmid Oil Co.'s Coopersville Bank 1, 13n10w-22, sd 1250 ft, sg. Sherman Drilling Co.'s Scheibe 1, 15n-7w-13, sd 1260 ft, sg. Larsen and Flynn's Swanson 1, 13n-10w, c-sw se 11, rig.

OSCEOLA COUNTY—Russell and Johnson's Geese 1, 18n-10w-34 bv. Smith Petroleum Co.'s Moser 1, 17n-10w-20, dr 1400 ft.

MONTCALM COUNTY — L. E. Duvall's Elknorch 1, 11n-10w-13, sd 1343 ft. L. G. Thompson's Knapp 1, 12n-9w-17, dr 3100 ft. Rex Oil & Gas Co.'s Olsen 1, 9n-7w-14, rig. Fred Turner's McConkie 1, 10n-5w-10, so 2735 ft, dr 3050 ft. T. F. Caldwell's Ingersol 1, 10n-5w-14, dr 1800 ft; Pugsley 1, 11n-5w-36, rig. Morris & Van Kuren's Evans 1, 10n-5w-22, rig. Burnstein Oil & Gas Co.'s Keel 1, 11n-5w-35, dr 2400 ft. St. Louis Pipe and Supply Co.'s Osterhaut 1, 11n-5w-36, dr 430 ft; Clark 1, 10n-5w-9, rig. W. J. Bernier's Strait 1, 11n-5w-34, dr 700 ft. Noah Andrew's Ries 1, 11n-5w-34, dr 500 ft.

GRATIOT COUNTY—Kelly and Evans' Pencak 1, 10n-4w-18, csg 5-in 3174 ft, sd. T. F. Caldwell's Land Bank 1, 10n-4w-18, dr 800 ft. Kircher & Moffett's Shaver 1, 10n-4w-4, dr 1400 ft. Strange and Fortney's Bovee 1, 10n-4w-7, dr 1300 ft. McClanahan Oil Co.'s Akin 1, 10n-4w-17, dr 2960 ft. Rex Oil & Gas Co.'s Biddle 1, 10n-4w-20, dr 1500 ft. Mammoth Petroleum Co.'s Graham 1, 11n-4w-31, Dundee 3192 ft, sw 3216, sd 3220 ft, may deepen. Newark Oil & Gas Co.'s Beck 1, 10n-3w-29, dr 2700 ft. Bila Oil Co.'s Ryan 1, 10n-1w-32, sp. Mid-State Dev's Anderson 1, 11n-3w, c-se ne-20, lcn.

EAST TEXAS

ANDERSON COUNTY—Gulf's J. M. Delaney 1 (174.2-ac), Phillip Martin sur, Camp Hill area, elev 573 ft, Pecan chalk 3890-4135 ft, top Austin chalk 4855 ft, dr 4900 ft; Southern Pine 1-A (105-ac), H. Main sur, Camp Hill area, elev Pecan chalk 3929-4234 ft, dr 5015 ft. Hunt Prod. Co.-Sun's Mrs. Alice Scott-Pure 2 (300-ac), Jas. Crawford sur, Slocum area, elev 411 ft, tested fresh water at 1115 ft. J. W. Luttes et al's C. M. McKee 1 (100-ac), W. F. Pool sur, 3 mi se Frankston, dr 2225 ft. R. B. Sanders et al's S. G. Moore 1 (28.83-ac), J. C. Rosson sur, Camp Hill area, lcn. Tide Water and Texas Seaboard's N. N. Wills 21-A, Cayuga field Trinity test, elev 308 ft, dr 8250 ft; C. T. Valentine 1 (301-ac), John Little sur, 9 mi n of Palestine, elev 454 ft, Pecan chalk 3621-3920 ft, Austin chalk 4725-4981 ft, coring 5220 ft; Shaw & Cern 1 (1216-ac), Daniel Parker sur, Long Lake area, dr 300 ft.

BOWIE COUNTY—Tex-Ark Oil Co.'s J. B. Hamilton 1 (40-ac), Jessie Milam sur, elev 272 ft, fsh 1098 ft.

CAMP COUNTY—E. J. Moran, G. E. & Ray Hubbard's W. M. Mitcham 1 (100-ac), L. Rose sur, 1½ mi n of Newsome, lcn.

CHEROKEE COUNTY—Florence Oil Co. & H. A. Baker's Tol Smith 1 (40-ac), Jose Pineda sur, 4 mi nw of Jacksonville, elev 547 ft, sp. Shell's New Birmingham 1, Levi Jordan sur, Rusk pool, mim. Jacksonville O&G Corp.'s H. D. Henderson 1 (40-ac), J. Pineda sur, elev 409 ft, sd 693 ft. Killough et al's J. S. Strickland 1 (40-ac), Urian Moore sur, 7 mi nw Jacksonville, elev 433 ft, sd 3505 ft. Cal T. Scott-Turpin and Stidham & Thrasher's Whiteman-Decker 1 (30-ac), J. H. Armstrong sur, Rusk pool, elev 546 ft, skid rig, sp. Roberts Bros.' H. E. Pryor 1 (3-ac), Jess T. Jones sur, Rusk pool, lcn. T. J. Wood & Young's New Birmingham 4 (160-ac), Levi Jordan sur, Rusk pool, dk.

FRANKLIN COUNTY—J. E. Farrell & Co.'s G. K. Ayres 1 (50-ac), C. H. Simms sur, rig.

FREESTONE COUNTY—J. E. Milburn & J. B. Patty's S. E. McAshan 1 (40-ac), G. Diaz sur, 3½ mi se Donie, sp and sd.

ELLIS COUNTY — Ed. Murphree & Lon Coker's Coke 1 (30-ac), R. de la Pena sur, elev 333 ft, Austin chalk 622-1010 ft, top Woodbine 1580 ft, top Red Beds 1610 ft, top lime (Georgetown) 1673 ft, dry and abd 1678 ft.

GREGG COUNTY—O. T. Clark et al's T. G. Williams 1 (100-ac), David Hill sur, 3 mi ne Longview, elev 426 ft, Pecan chalk 2391-2985 ft, top Austin chalk 3447 ft, co at 3771 ft.

HENDERSON COUNTY—Edson Pet. Co.'s C. L. Loper 1 (3-ac), Isaac Clendennen sur, Cayuga area, lcn. O. M. Rector et al's C. L.

Loper 1 (3½-ac), I. Clendennen sur, Cayuga area, lcn. Taubert & McKee's M. T. Dodd 2 (160-ac), Geo. Aldrich sur, 4 mi e of Malakoff, lcn. Fred Upchurch et al's C. L. Loper 1 (3½-ac), I. Clendennen sur, bldg road. C. D. Neff et al's H. G. Small 1 (100-ac), Isaac Greeson sur, sw of Cross Roads, mim. H. M. Wilson et al's fee 1 (943-ac), Thomas Caro sur, 5 mi n Malakoff, dk. Toddie L. Wynne et al's C. L. Loper 1 (11-ac), I. Clendennen sur, lcn.

HOPKINS COUNTY—D. A. Hale et al's L. N. Hall 1 (70-ac), A. Caro sur A-143, elev 506 ft, Pecan chalk 1825-2040 ft, top Austin chalk 2728 ft, sd 2950 ft.

HUNT COUNTY—D. T. Cauble et al's Y. B. Reed 1 (220-ac), F. Thweatt & C. B. Payne sur, 3 mi se Greenville, top Woodbine 2809 ft, top Red Beds 2874 ft, dry and abd in shale 3535 ft, td; Reed 2, shallow test, 150 ft n of failure. J. F. Morrissey Co., Inc.'s P. B. Fry 1 (146-ac), Calloway Davis sur, 7 mi se Ladonia, sd repairs 1538 ft. H. G. Samson, Shawver et al's J. R. Phillips 1, W. L. James sur, elev 522 ft, Pecan chalk 556-631 ft, top Gober chalk 1202 ft, dr 2500 ft.

KAUFMAN COUNTY—G. H. Germany et al's D. Clark-W. S. Kirby 1, S. Edens sur, sd 1780 ft. L. P. Kean et al's J. B. Hunter 1, R. Sowell sur, 4 mi s Terrell, elev 453 ft, top Austin chalk 1785 ft, sd 3400 ft. Murray & Emerson's G. W. Martin 1 (100-ac), W. F. C. Butler sur, dr 715 ft.

LEON COUNTY—Killough & Tucker's J. W. Lee 1 (10-ac), Jacob Burleson sur, Buffalo area, top Pecan chalk 3870 ft, sd repairs 3875 ft. Harry Williams et al's B. H. Henry 1 (70-ac), R. Rogers sur, 2 mi ne Normangee, dr 2175 ft.

LIMESTONE COUNTY—Dan H. Daugherty et al's Sallie Welch 1 (94-ac), Pedro Varella sur, Austin chalk 2350-2650 ft, top Woodbine 2890-3003½ ft, co with show o&g. J. W. Kemp Co.'s Vol DeLong 1 (40-ac), Pedro Varella sur, 2½ mi n Thelma, top Woodbine series 2750 ft, sandy-shale 2763-2866 ft, cem cas. J. Edward Mills et al's J. B. Hunt 1 (34¼-ac), Israel Woods sur, 3 mi ne Kosse, Pecan chalk 2010-2137 ft, Austin chalk 2780-3158 ft, top Woodbine sand 3578 ft, dr 3655 ft. W. A. Reiter, Y. Rogers & W. H. Foster's J. Minor Tidwell 1 (230-ac), 2½ mi sw Mexia field, rig.

MORRIS COUNTY—Steve J. Rotondi et al's W. & C. Smith 1 (50-ac), M. C. Vela sur, 2½ mi sw Naples, sp and sd.

NAVARRO COUNTY—L. N. McCulloch et al's Berry Bros. 1 (35-ac), W. W. Moss sur, Austin chalk 751-1060 ft, sd 1182 ft. E. M. Thomason & Co., Inc.'s Celia Moran 1 (100-ac), Wm. Haggard sur, dr 600 ft. Wiggins & Albritton's D. A. Donoho 1 (63½-ac), John Caudle & Highnote sur, 2 mi sw Corsicana, elev 467 ft, sd 1439 ft.

RAINS COUNTY—Allen & McClung's Ida Butler 1 (75-ac), Nancy Brantley sur, 2 mi sw Emory, lcn; A. Giles 1 (105-ac), Thomas Cunningham sur, 7 mi sw Emory, lcn.

ROBERTSON COUNTY — H. L. Patton Co.'s W. H. & H. A. Ely 1 (616-ac), Antonio Manchaco sur, 5 mi se Hearne, elev 392 ft, top Carrizo 661 ft, dr 2700 ft.

RUSK COUNTY — Ben E. Lamb et al's Haywood Leath 1 (185-ac), L. J. Dooley sur, 2½ mi ne Pirtle sur, elev 370 ft, Pecan chalk 2418-2793 ft, Austin chalk 3352-3512 ft, td 4750 ft, pb to 4710 ft and bailed little oil. Stewart & Egan's Hall Wood 1 (847-ac), blk 12, Jose I. Sanchez sur, top Pecan chalk 2712 ft, top Austin chalk 3419 ft, sd in shale 4006 ft.

SMITH COUNTY—W. L. Cloud & A. G. Deck's Dora Kendall 1, John Williams sur, 3 mi e of Van field, sd 1650 ft. Sun & H. L. Hunt Prod. Co.'s E. W. Judge 1 (55½-ac), Marshall University sur, 3 mi se Tyler, cem surface eas.

TITUS COUNTY—Steve J. Rotondi et al's O. C. Lillianstern 1 (40-ac), W. H. Crawford sur, 5 mi se Talco, elev 301 ft, dk.

UPSHUR COUNTY—Thos. D. Humphrey et al's Lizzie Brown 1 (92-ac), R. Wyatt sur, 2½ mi s of Ore City, elev 449 ft, dr 3900 ft.

VAN ZANDT COUNTY—A. A. Geyer et al's J. E. Crim 1 (41.6-ac), Wm. Daniel sur, lcn. Tanner & West's J. D. Smith 1 (45-ac), Marshall University sur, 3 mi se Van, lcn. Newt Tidwell & W. J. Rogers' L. E. Breucher 1 (98¾-ac), David Clapp sur, 5 mi se Wills Point, elev 499 ft, top Pecan chalk 1845 ft, top Austin chalk 2924 ft, jkd at 3233 ft, skid rig 70 ft west.

WOOD COUNTY — Philclark Drlg. Co.-Dean Bros. and Adkisson's W. H. Finklea 1 (175-ac), Benjamin Anderson sur, 8 mi n Alba, elev 393 ft, top Pecan chalk 2262 ft, dry and abd 2510 ft.

HARRISON COUNTY—Roy C. Swails et al's Bonnie Pitts 1, sec G. W. Martin sur, re-cemtd 10-in csg 170 ft, wocs. Hanover, Bergendall et al's Buchanan 1, W. M. McInvain sur, sd 3682 ft. Hammonds & Williams' W. T. Cock 1, J. N. Sorrell sur, arr deepen, td 2392 ft.

PANOLA COUNTY—J. L. Cadrin's Robt. Johnson 1, J. Johnson sur, dk. Flinchbaugh & McAneny's M. G. McCormick 1, Jas. P. McAdams sur, spd cemtd 10-in csg 150 ft. G. F. Hudson's J. F. Nail 1, C. McCray sur, elev 283 ft, claim so, 4½ in csg 2300 ft, td 2337 ft. Geo. Le Grand's P. J. Laidleigh 1, A. Thompson sur, 10-in csg 62 ft, dr 700 ft; S. B. Wallace 1, A. M. McLaughlin sur, re-bldg dk, rog.

SHELBY COUNTY—I. M. Bradley et al's J. J. Ashberry 2, J. M. Mitchell sur, 6¾ in csg 2960 ft, claim sg, td 3390 ft. C. E. Litchefield et al's W. C. Windham 1, A. H. English sur, dr 3000 ft. J. W. Reynolds et al's Polley Est. 1, B. F. Porter sur, mim.

SOUTH TEXAS

BANDERA COUNTY — Palm Winn Oil Co.'s R. B. Watson 1, sec 71, co 1700 ft, prep to set csg. Plateau Oil Co.'s R. G. Garrison, sec 506, GC&SF sur, re-dr 3409 ft.

BASTROP COUNTY—R. L. Batts & Jake Jarmon's A. Paris 1, J. Maximillian sur, sd 300 ft. Malone & Owens' S. S. Spooner 1, L. Leverenz sur, sd 1965 ft. Joe Mills et al's H. Litton 2, A. Navarro sur, dr 725 ft.

BEE COUNTY—Earl Callaway et al's I. J. Miller 1, C. Rivas sur, ru. G. M. Church's J. C. Woods 1, J. Ryan sur, lcn. Dougherty et al's Hicks et al 1, sec 45, Hicks & Hall sub, Uranga gr, td 4248 ft, perf csg 3613-30 ft, showing small volume gas, washing. L. A. Douglas' Imogene Hall 1, T. J. Butler sur, mim. Falvey et al's S. D. Copeland 1, B. Q. Hadley sur, dr below 1000 ft. Humble O&R Co.'s Thompson 2, Garret Roache sur, running 7 in csg to 5987 ft, heaving shale; J. C. Woods 1, 4891.5 ft w along fence fr se cor of Wood 4025.3-ac tr, thence n 15 degrees e 466 ft, ru. Francis P. Hynes et al's T. M. Plummer 1, sec 33, Chessman sur, td 1530 ft, move in new rig. Little John et al's B. Borroum 1, Wm. Gill sur, set sur csg, woc. Bryce McCandless' Grissom 1, W. W. Grant sur, lcn. United Prod. Co.'s G. A. Kerr 50, begin s cor W. J. Porter sur, thence nw along swl 2100 ft, thence 540 ft sw at right angles in George A. Kerr sur, 1½ mi sw N. Pettus field, dr 300 ft. Wrightsman Oil Co.'s A. J. Kimball 1, S. Winship sur, sand 3536-42 ft, completing.

BEXAR COUNTY — American Gas Co.'s Oliver 5, M. F. Rodriguez sur, dr 2840 ft, show some o&g in sand and sandy shale. James B. Cunningham, dr below 400 ft. M. A. Frederich's Fee 1, Recardo sur, dr 1067 ft, sh and boulders. McPhee & Briggs' Florence Lamb, M. de Luna sur No. 4, dr around 2150 ft. Mid-Tex Oil Co.'s Walker 1, S. N. Dodie sur No. 79, ru. J. H. Parker's M. McCloskey 1, F. A. Desaque sur, dr 450 ft. C. C. Raborn's C. McCauley 1, Wm. Harrison sur No. 52, dr 540 ft; Lee Upson Palfrey 1, Almaniz League, lcn. Rowan & Nichols Oil Co.'s A. Zigmond 1, A. Deffenbaugh sur, coring 1725 ft, top Edwards lime 1708 ft, nothing showing.

BLANCO COUNTY—R. T. Rowe & W. E. Nixon's Polk Morrisey, T. H. Webb sur No. 91, dr 100 ft.

CALDWELL COUNTY—Ballard & Whitting's A. C. Bridges 1, S. Seal sp. R. S. Bollins et al's C. F. Robertson 1, John A. Neill sur, sp. Cunningham et al's J. M. Pierce 1, S. Seal sur, td 2269 ft, testing. Exploration Dev. Co.'s W. T. Mooney 1, S. Seal sur, completing below 2056 ft. Ogden & Reed's H. Brewer 1, Martinez sur, dr 800 ft. R. Y. Walker's Walker 2, S. Seal sur, 500 ft nl, 150 ft wl of tr, ru.

CALHOUN COUNTY — Continental Oil Co.'s Moody 2, c ne ne sec 6, blk C, P. Garcia sur, sd 6522 ft for new ds. Empire Gas & Fuel Co.'s Dusek 1, 440 ft sel, 540 ft nel of 70-ac tr in Benevides sur, ru. Adrian Moore's McAster 1, M. Sanchez sur, dr 6000 ft. Texas Co.'s R. Duelburg 1, M. Sanchez sur, td 6450 ft, set 7 in csg 6240 ft in sdtr hole; Ada Foster 1, Esparza sur, ru; Geryk 1, Y. Benevides sur, dr 6230 ft; E. P. Kupatt 1, 466 ft sel and swl of 81.5-ac tr, Y. Benevides sur, ru; Martin 1, F. Garcia League, sd 7070 ft for rep.

DUVAL COUNTY — Bridwell Oil Co.'s Sutherland 2, sec 122, coring 2728 ft, trying to re-work into producer. Byrd Oil Co.'s Wright et al 7, sec 101, made big gasser, bad casing job, resetting casing, no details. Continental Oil Co.'s C. D. Sevier 5-A, 660 ft sl and el sec 54, ru. Dulce Oil Co.'s R. Serna 1, sec 384, dr 1610 ft. Duval Oil Co.'s Bishop Cattle Co. 1-A, sec 70, dr 3140 ft. Frank Gravis' J. W. Byland 1, blk 4, sec 78, sand 2578-88 ft, completing. Humble O&R Co.'s R. Serna 1, 330 ft sl, 2310 ft wl sec 384, clear lcn; T. D. Smith 1, sec 382, td 95 ft, sp and finish ru. Intrepid Oil Co.'s Parr Ranch 2, sec 115, dr 5150 ft. Kone Prod. Co.'s Peters Ranch 1, sec 176, ru. Magnolia Pet. Co.'s Bennett 2, sec 432, ru. D. H. O'Byrne's Ball 1, sec 3, Agua Poquita gr, dr 1250 ft. T. M. G. Drlg. Co.'s Davidson 1, sec 90, prep to sp.

FRIO COUNTY—Amerada Pet. Corp.'s W. H. Smith 1, J. B. Mason sur, re-dr 4310 ft.

GOLIAD COUNTY — Keystone Royalties Co.'s G. B. Wood 1, John Shearn sur, sd 4231 ft for boiler rep. Walter Taber's C. C. Hanley 1, John Daly sur No. 15, set sur csg, wocs.

GUADALUPE COUNTY—W. J. Walton's Zoborosku 2, 530 ft nl, 150 ft wl of 227-ac tr in J. D. Clements sur, mir. Gode et al's Hicks 1, E. de los Santos sur, sp. A. D. Locke's Mrs. N. S. Lowman 1, Cyrus Campbell League, td 1810 ft, now dr 1350 ft in sdtr hole. Mineral Corp. of Texas' Allan Phillips 1, Cortines sur, sd 868 ft for ds. Suttle et al's Baenzinger 1, A. O. Manchola sur, acidizing 2155 ft.

HIDALGO COUNTY — Bluff Pet. Co.'s

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Knowles 1, sh 14, por 49, td 629 ft, set 12½ csg 315 ft. D. M. C. Oil Co.'s Dakam 1, blk 34, por 45, test sw and little oil 4114 ft, error indicated in casing seat, set at 4074 ft instead of 4090 ft, to run liner to td and perf. C. O. Maddox et al's John H. Shary 1, lot 21, Shary sub, por 58, contract let. Nedler and Graham's Osca Daskam 1, blk 32, por 45, dk blown down. Union Sulphur Co.'s ARGL&I Co. 1, tr 2297, lot 59, N. Capisallo dist, Llano Grande gr, td 6431 ft, co 5500 ft; ARGL&I Co. 2, lot 2082, blk 86, N. Capisallo dist, Llano Grande gr, td 8044 ft, cement hole 4095 ft, sdtr.

JACKSON COUNTY — Shell Pet. Corp.'s McCrory 1, Morris & Cummings sur, sec 15, sd for orders 7408 ft.

JIM HOGG COUNTY—Darby Pet. Co.'s Holbein 1, blk 5, Los Animas gr, dr 1315 ft. French Oil Corp.'s Ed. East 2, blk 74, sh 2, Moritas gr, coring 2055 ft. Miller et al's Yeager 1, blk 6, sur 20, fsh 3530 ft. Phillips et al's Allen 1, blk 293, Pippin sub, Randado gr, lcn. Sun Oil Co.'s L. R. Brooks 1, Domingo Abajo gr, ru.

JIM WELLS COUNTY—A. M. Hagan et al's Robt. Adams 1, sec 10, prep to sp. O. W. Killam's W. D. Wade 7, blk D, Bode sub, ru. Magnolia Pet. Co.'s A. A. Seeligson 6, Canale sur No. 218, dr 6235 ft. Maher & Shira's Schaeffer 1, S. Bigham sur, dr 4820 ft.

KARNES COUNTY—Jim Kendricks' W. H. Radford 1, Morse Nichols sur, sd 3110 ft for fuel. W. C. McBride, Inc.'s N. B. Boultinghouse 1, J. S. Menefee sur, dr 450 ft. Harry Sample et al's F. Seeger 1, J. Poitevent sur, dr 2775 ft, Pettus 2262 ft, Yegua 2444 ft, both test sw.

KENDALL COUNTY — J. E. Freeman's Gerfers 1, Mark Hodson sur, sec 796, mim.

KLEBERG COUNTY—Fidelity Exploration Synd.'s Kivlin 1, lot 4, blk 39, KT&I sur, lcn; Paul O'Henry 1, lot 2, sec 49, KT&I sur, set 370 ft sur csg, wocs.

LIVE OAK COUNTY — Benco Oil Co.'s E. Mahoney 1, Mark Killely sur, sp. Henderson Coquat's L. A. Reagan 1, McGloin sur, sd 1240 ft. Henderson Coquat's H. E. Rex 1, GH&H sur No. 1, sd for orders 5500 ft. Darby Pet. Co.'s McNeill 1, GH&H Ry. sur, coring 4361 ft. Feltner, Lefevre & Spice's Carter Inv. Co. 1, Hooper & Wade sur, sec 299, dr 1830 ft. Gem Oil Co.'s J. E. Lyne 1, sec 134, M. M. Lyne sur, lcn. Houston Oil Co.'s Cartwright 32, M. Trudo sur, coring 5936 ft. Marine Oil Co.'s E. S. Adair 1, J. McGloin sur, sd 5350 ft. R. S. Nixon's Chamberlain Mortgage Co. 1, Wm. Hill sur, blk 8, sec 174, lcn. E. W. Turner's V. W. Walker 1, 330 ft swl, 1850 ft nwl blk 9, C. Simmons sub, ru.

McMULLEN COUNTY—Bussa Oil Co. of Texas' F. B. Norton 1, J. A. Jean sur No. 29, lcn. Henderson Coquat's Ezzell 1, D. R. Fant sur, complete 768 ft, making some gas. Darby Pet. Corp.'s E. R. Hagist 1, 330 ft nl and el n ne nw sec 108, lcn. John O. Gibson's Masur & McDowell 1, sec 19, HT&B sur, prep to dr below 130 ft sur csg; G. C. West 1, blk 4, sec 14, HT&B Ry. sur No. 1092, sd 465 ft. Howard & Carpenter's Jungman 1, M. Hely sur, no rept. Humble O&R Co.'s J. W. Atkinson 1, 330 ft sl and el 240-ac tr, sec 13, lcn. Loma Oil Co.'s J. Dickinson 1, Farm 13, B. Sparks sur, dr 200 ft; L. Jacob 2-W, Benham sur No. 9, dr out plugs 925 ft. Pitkin & Goldston Oil Co.'s E. R. Hagist 1, 330 ft nl and wl n nw ne sec 108, lcn. C. W. Points et al's Fahler 1, Geo. Pittuck sur, ds stuck 785 ft. C. C. Shumway et al's Shiner Ranch 8, sec 53, Shiner sub, sd 1650 ft for fuel. Texio Oil Co. & Illinois Pet. Co.'s J. W. Atkinson 2, 330 ft sl, 1650 ft el of w½ Martha J. Dean sur, lcn. Harry Wilder et al's Wm. Fahler 1, Geo. Pittuck sur, dr 500 ft

MEDINA COUNTY—Joe Deupree's Hugo Batot 1, John Ball sur No. 1478, re-dr 401 ft. Gates & Hill's Odem 1, H. Castro sur No. 174, ru. Showmaker et al's Noonan 1, Alsbury sur, ru to dd, td 450 ft.

NUECES COUNTY — A. F. Holliday's J. Griffith 1, Geo. Frank sur No. 416, coring 4515 ft. Magnolia Pet. Co.'s Baldwin 1, sec 165, ru. Southern Minerals Co.'s Rand Morgan 1, lot 29, Elitt sur, dr 5627 ft

SAN PATRICIO COUNTY—Conroe Drlg. Co.'n E. H. Welder 1-D, Portillo sur, sd 3810 ft for ds. Continental Oil Co. & Atkins & O'Neil's J. F. Welder 3, Juan Hart sur, sd 754 ft for orders. Plymouth Oil Co.'s E. H. Welder 2-C, sec 49, Welder sub, sand 5594-5624 ft, set csg, wocs; E. H. Welder 3-C, sec 49, Welder sub, sand 5486-5501 ft, completing; Welder 1-D, Portillo sur, coring 5320 ft.

STARR COUNTY—Accumulative Royalties Co.'s H. F. Ferry 1, lot 8, blk 15, B&B sub, por 86, sp. Armstrong, Emanuels & Adams' S C C C 1, blk 57, J. L. sub, por 89, td 2715 ft, pb 2240 ft, sd. C. R. Borah's A. Guerra 1, sh 6, San Jose gr, sd 3210 ft for water, completing new water well. John Clopton's Kelsey Bass 1, blk 5, sec 10, por 86, ru. Henshaw Bros.' S. Sanchez & Bro. 1, sec 344, set 100 ft sur csg, wocs. Houghston Oil Co.'s Wood-Gregg 1-A, por 84, dr 2515 ft. Lindberg & Davis' Kelsey Bass 1, sh 6, por 75-76-77, sd 500 ft. Hiriam Reed's Doyno Chatfield 2, blk 6, tr 21, por 80, dr 840 ft. Sun Oil Co. & Humble O&R Co.'s Mantor & Briggs 1, sec 53, dr 3530 ft.

VICTORIA COUNTY—Crown Central Pet. Co.'s Schovajsa 1, lot 15, Rupley sur, sp. Eastern Texas Oil Co.'s Henderson & Pickering 1, lot 19, Benavides sur, dr 1500 ft; Shovajsa 1, lot 14, Rupley sur, trying to comp 4789 ft; E. Williams 1, E. Benevides sur, lcn. Gillespie & Superior's Brandt 1, lot 11, Rupley sur, coring 4727 ft; Henderson & Pickering (Farber) 2, Nancu Dean sur, lot 6, td 6324 ft, pb and testing 4846-56 ft; J. Janis 1, lot 9, Nancy Dean sur, ru. Houston Oil Co.'s Fagan 1, F. & J. M. Rodriguez sur, dr 2500 ft. Magnolia Pet. Co.'s Henderson & Pickering 1, lot 18, E. Benevides sur, dr 2350 ft. E. L. Smith's Henderson & Pickering 1, blk 4, Rupley sur, ru. Texas Co.'s A. M. McFaddin 9, J. M. Rine sur, dr 6185 ft. Trans-State Oil Co.'s Robt. Kanster 1, R. Manchola gr, dk.

WEBB COUNTY—Allison et al's F. Jones 1, sec 1640, dr 537 ft. Rose B. Barnhardt's de la Garza 1, 1590 ft nl, 200 ft el sec 262, sand 2397-2406 ft, prep to test (this is an old well, deepening, but formerly reported as Carolina-Texas Oil & Gas Co). Mills Bennett's Lopez 1, 1320 ft wl, 2500 ft sl sec 73, prep to mim. Ros Amigos Oil Co.'s Barcia 1, sec 2168, owdd, td 1596 ft, now ru.

WILLACY COUNTY—Kingwood Oil Co.'s Stillman Ranch 1, lot 16, blk 30, sh 44, Stillman Ranch sur, sd 2136 ft for rep. South Texas Dev. Co.'s F. Armendiez 1-A, sh 4, td 3660 ft sd for new rig.

WILLIAMSON COUNTY—Fuchs & Walters' G. Ollman 1, 150 ft swl, 300 ft most northerly swl of 264-ac tr, Bevil sur No. 56, fsh 90 ft. A. T. Parr et al's Dar Murphy 1, J. Cowan sur, sd 1263 ft. W. L. Stephens' J. P. Carlson 1, S. C. Jones sur, dr 450 ft. W. B. Stone & J. W. Gabehart 1, P. S. Wernli 1, P. Cartwright sur, sd 950 ft.

ZAPATA COUNTY—Cox et al's D. Yzaguire 1, sh 17, por 15, dr 2050 ft. H. C. Dean et al's J. M. G. Martinez 1, blk 34, sh B, W. R. Duke sub, Charco Redondo gr, sp. Gem Oil Co.'s J. F. Ramirez 1, sh 3-B, por 18, set 400 ft 10 in csg, wocs. Humble O&R Co.'s E. Dominguez 1, 12,785 ft nel, 1320 ft sel of por 31, ru. O. W. Killam's A. M. Bruni 10, blk 60, Blas Uribe sub, Borrego gr, td 1822 ft, set 5 in csg 1819 ft, now sd; Bruni 3, 5895 ft nwl, 2385 ft nel of Barricito Pasture, Borrego gr, lcn. Lawlon & Leavel's Winslow 1, 330 ft swl and nwl share 7, por 19, lcn. E. L. Smith Oil Co.'s R. Hinnant 1, blk 27, sec 307, testing 1429 ft. Stover et al's F. G. Martinez 1, blk 125, sh 1, El Grullo gr, lcn.

TEXAS GULF COAST

ANGELINA COUNTY—Lee Tex Oil Co.'s A. H. Geisler 1, 1 mi nw of Lay, B. J. Thompson sur, sd 1830 ft.

AUSTIN COUNTY—John C. Crossman et al's Corporation of San Felipe 1, 4½ mi e of Sealy, San Felipe de Austin 5 League, dk. Deering & Kayser's T. A. McClenton 1, se of Bellville, Thos. Bell sur, dr shale 1570 ft. Paul English's F. Luhn 1, 1 mi se of Kenney, D. Chandler sur, temp abd.

BRAZORIA COUNTY—Amerada's Houston Farms Dev. Co. 2, Rattlesnake Mound prospect, Perry & Austin No. 106 sur, 8⅝-in csg at 815 ft, wocs, td 817 ft. Harrison & Abercrombie's Bernard River Land Co. 2, Old Ocean, C. Breen sur, dr below 550 ft. Texas Co.'s Freeport Sulphur Co. 1, 2400 ft east of the canal, Areola sur, 9⅝-in csg at 4186 ft, wocs.

BRAZOS COUNTY—Barnett et al's Broach 3, mir for Wilcox sn test.

CHAMBERS COUNTY — South Gulf Oil Corp.'s R. M. White 1, 7½ mi nw of Anahuac field, Luke Bryan sur, abd 7114 ft. R. A. Mason et al's White 1, J. McGahey sur, mim.

FORT BEND COUNTY—C. B. Bunte's S. J. Winston 1, 4½ mi nw of Rosenburg, S. Isaaca sur, dk.

HARRIS COUNTY—Hebert, Still and Hooper's A. Backman 1, Ogburn area, J. Ogburn sur, rog. Stanolind's Fee Land 1, South Houston, HT&B sur, prep to complete, td 5069 ft. T. S. & F. Oil Co.'s J. B. Hines 1, 1½ mi sw of Lynchburg, A. McCormick sur, wocs at 3400 ft. West Prod. Co.'s O. P. Woodburn 1, Genoa, A. Whitlock sur, 6912 ft, shale and li.

JEFFERSON COUNTY — Sun Oil Co.'s Hebert & Broussard 1, B. Blackmon sur, Labelle area, rig.

LIBERTY COUNTY—Jack Frazier's Lynott Buffon 2, 7500 ft ne of No. 1, J. Robeson sur, sd at 2703 ft. A. L. Maxwell et al's M. P. Hinchcliff 1, 2 mi ne of Cleveland, H&TC sur No. 105, td 5341 ft, sd in shale.

MADISON COUNTY — Madisonville Pet. Corp.'s D. C. Cannon 1, 3 mi nw of Madisonville, T. Phillips sur, ru. Poteete et al's Poteete 1, ne of Madisonville, Lewis Helsey sur, dr below 100 ft.

MATAGORDA COUNTY — Continental's Feife 1, Citrus Grove, J. S. Chriswell sur, dr shale 3980 ft. H. M. Smith's Wadsworth 1, S. R. Fisher sur, lot 3, blk 5, cor electrically at 8414 ft.

MONTGOMERY COUNTY—Travis Baker et al's Foster Est. 1, J. M. de la Garza sur, temp abd. Gholson et al's A. Parker 1, nw of Willis, J. Lindley sur, wocs at 3769 ft. Paul Sanders et al's Tex. L. L. L. Co. 1, Splendora, Walker County School Land sur, lcn.

ORANGE COUNTY—Ellis Oil Co.'s G. W. Pell 1, J. M. McHernie sur, dr shale 2080 ft. Dick Schwab's Banker and Rutan 1, se of Orange field, Jett sur sd to core at 3733 ft.

POLK COUNTY—J. W. Leggett et al's Bergman 1, Pinkney sur, rig.

SAN JACINTO COUNTY — Turnbull & Irwin's Moore 1, near Cold Springs, J. D. Martinez No. 3 sur, ru. Ralph Sterns' R. B. Love Est. 1, D. D. McGee sur, dk.

TRINITY COUNTY — Gulf's Trinity Lbr. Cd. 2, Trinity County School sur, dr shale 690 ft.

WALKER COUNTY — E. E. Gray, Tr.'s Weinzell 1, J. J. Porter sur, temp abd at 4480 ft.

WASHINGTON COUNTY—Powers Prod. Co.'s Boenker 1, w of Washington, J. Newman sur, 10¾-in csg at 85 ft, dr below 1200 ft.

WHARTON COUNTY—Texas Co.'s Pierce Estate A-2, 2100 ft nw of A-1, I&GN sur, sec 39, blk A-405, dr below 4415 ft.

HARDIN COUNTY—Kirby Pet. Co.'s Kirby Lbr. Co. 3, James Stephenson sur, dr shale 4175 ft.

LOUISIANA

ACADIA PARISH—Continental Oil Co.'s Theogen Ortigo 1, 6 mi nw of Iota, sec 28-7s-2w, dr shale 4052 ft. Humble's Rice Milling Co. 1, s of Crowley field, sec 27-10s-2e, dr shale 8757 ft.

AVOYELLES PARISH—Southern Star Pet. Co.'s Boyette 1, sec 28-3n-5e, sd 3887 ft account high water.

BEAUREGARD PARISH—C. N. Drilling Co.'s Long Bell Lbr. Co. 1, 6 mi w of Ludington, sec 26-2s-8w, dr shale and lime 3246 ft.

CALCASIEU PARISH—Buhler Oil Co.'s Faist 2, 900 ft se of No. 1, 26-8s-10w, td 3525 ft in shale and lime, sd fuel. Wheeler Oil Co.'s School Land 1, s of Iowa field, sec 16-9s-8w, sd in shale at 3720 ft.

CAMERON PARISH—Magnolia's Broussard 1, sec 13-12s-9w, td 7244 ft, reconditioning hole.

EAST BATON ROUGE PARISH—Superior's Duplantier Community 1, s of Baton Rouge, sec 65-7s-1w, fsg at 7747 ft.

EVANGELINE PARISH—Basile Oil Co.'s Hirsch 1, 6 mi se of Hampton, sec 14-6s-2w, dr shale 5130 ft.

EAST FELICIANA PARISH—Thompson Creek Oil Co.'s Fanny Noland 1, e bank of Thompson Creek, sec 79-1s-1w, sd high water 1589 ft.

IBERIA PARISH—Texas Co.'s State Lake

Fausse Point 1, s flank of dome, sec 35-11s-8e, r at 4868 ft.

JEFFERSON PARISH—Lincoln Oil Co.'s Rigaud 1, Grand Island, sec 28-21s-25e, abd at 7039 ft.

ST. BERNARD PARISH — Emerald Pet. Co.'s Shell Beach Properties 1, Bayou Louis, sec 31-13s-15e, dr shale 4470 ft.

ST. MARTIN PARISH—Texas Co.'s St. Martin Land Co. 7, Henderson prospect, sec. 9-8s-7e, spd.

NORTH LOUISIANA

BOSSIER PARISH — W. A. Kirklin, Tr.'s Garrett & McKellar 1, se nw nw 3-21n-13w, dr 2110 ft. Plain Dealing Synd.'s L. A. King 1, nw ne ne 36-23n-13w, tested est 5-15 mil ft gas ds test, cemtd 4¾-in csg 2824 ft, td 2840 ft (Ozan). Richplain Oil Co.'s Gaines 1, nw nw 22-22n-13w, 10-in csg 42 ft. The Leonard Co.'s Pearson 1, 22-21n-14w, fsg 3300 ft. Scott & Howard's Sherrill 1, ne se 13-19n-12w, lcn abd.

CADDO PARISH—Ed Bailey et al's Hartzo 1, ne nw 28-22n-15w, sd 1230 ft. F. D. Hyde et al's Thigpen-Herold 1, nw nw se 5-15n-15w, dk. A. D. King, Tr.'s Roach 1, 4-14n-16w, arr use acid, td 2712 ft, chalk. Simplex Oil Co.'s Keith 1, sw se 18-20n-14w, pb to 2300 ft, tested dry, arr test 2310-40 ft, old td 2748 ft. Texas Trading Co.'s J. B. Waskom 1, ne ne 30-19n-16w, rur. United Gas Pub. Serv. Co.'s D. F. Barr 1, 29-23n-16w, dr 2400 ft. Young 1, 21-23n-16w, dr 5377 ft.

CALDWELL PARISH—G. C. Davis' La. Cent. Lbr. Co. 1, sw sw 14-11n-3e, owdd, co td 1850 ft. Critchett & Wood's La. Cent. Lbr. Co. 1, se nw ne 18-11n-3e, 10-in csg 133 ft, dr 1450 ft. G. W. Zeigen et al's La. Cent. Lbr. Co. 1, nw sw sw 25-13n-3e, cemtd 10-in csg 100 ft, td 200 ft.

CATAHOULA PARISH—Phillipi et al's La. Cent. Lbr. Co. A-1, 2-9n-6e, 6-in csg 820 ft, tested est 2½ mi ft gas, si, td 948 ft.

CLAIBORNE PARISH—J. C. King et al's Odis Webb 1, nw ne 21-21n-8w, elev 265.6 ft, top Annona chalk 2335 ft, sd repr rig 2385 ft, chalk. E. T. Oakes et al's Patton Est. 1, ne ne 1-20n-5w, elev 357.3 ft, top Cane River 650 ft, cemtd 12½-in csg 655 ft, hd black shale.

DE SOTO PARISH—E. B. Bird et al's A. D. Johns, Jr., 1, se nw 20-14n-16w, elev 290 ft, 6-in csg 2583 ft, washed with oil, sd td 2645 ft. E. L. Foster et al's Youngblood 1, 9-11n-14w, cemtd 6-in csg 2735 ft, blew in while dr in, est 4 to 6 mi ft gas with 930 pounds rock pressure, wo gauged td 2860 ft. P. G. Frailey et al's J. E. Stell 1, 5-12n-16w, ru and sd. C. T. Ruffin's Elmo P. Lee 1, nw sw 33-14n-13w, spd dr 1900 ft. Ed Saffold et al's T. D. Thigpen 1, nw sw ne 6⅝-in csg 1620 ft, used acid with so, sd 1732 ft chalk. Ben F. Smith's J. W. Porter 1, sw nw 23-12n-13w, 10-in csg 75 ft, dr 2810 ft.

EAST CARROLL PARISH—Century Oil & Drlg. Corp.'s Olivedell Pltg. Co. 1, 56-21n-12e, dr 2300 ft. O. G. Collins et al's H. L. Hunt 1, cent 26-22n-13e, dry at 3100 ft, top Monroe gas rock, arr deepen.

GRANT PARISH—Alexander et al's Maxwell 1, 9-9n-1e, dk and mir.

JACKSON PARISH—American Liberty Oil Co.'s Lusk 1, cent ne ne 1-16n-1w, rur.

MADISON PARISH — Southern Land & Expl. Co.'s Deltic Inv. Co. 1, nw nw 1-17n-12e, spd.

NATCHITOCHES PARISH—Clyde Creighton et al's Friedman Est. 1, swc 52-7n-6w, trying set 8-in csg at 1000 ft, after sg at 1300 ft, td 2947 ft. Edwards & Turner's Prudential Life Ins. Co. 1, nw nw 26-10n-6w, rebldg dk. Mike Kissick's Raines 1, sw sw 28-9n-10w, arr deepen, td 3565 ft. Leslie Prod. Co.'s Tom Moffitt 1, se nw 19-10n-10w, lcn.

OUACHITA PARISH — American Liberty Oil Co.'s Golson 1, cent nw nw 25-17n-1e, rur.

RED RIVER PARISH—Sterling O&G Co.'s Long-Bell Lbr. Co. 1, se ne se 19-13n-9w, pb to 1150 ft from 2930 ft, cemtd 6-in csg 1120 ft, wocs.

UNION PARISH — Crescent Drlg. Co.'s Woolie 1, ne ne 34-19n-1e, spd 10-in csg 40 ft. Southern Prod. Co.'s W. E. Clark 1, se nw nw 17-23n-1e, 10-in csg 40 ft, dr 750 ft.

WEBSTER PARISH—Virgil Likens' E. L. Stewart 1, nw nw 25-18n-10w, dr 2200 ft.

WINN PARISH—P. E. Parsons et al's Tremont Lbr. Co. 1, nw sw 10-12n-2w, mim.

ARKANSAS

ARKANSAS COUNTY—Grand Prairie Realty Co.'s Fischer 2, ne nw nw 6-6s-4w, spd dr 120 ft.

HEMPSTEAD COUNTY—F. W. Martin et al's A. J. Lafferty 2, se nw 17-14-24, dk.

LA FAYETTE COUNTY—W. H. Harvey's R. F. Allen 1, ne se sw 13-19-25, dk. Transportation Pet. Co.'s Cochran Est. 1, ne se 25-19-25, dk. Red River Lbr. Co. 1, sw sw 26-19-25, elev 250 ft, top Nacatosh 1804 ft, top Ozan 2740 ft, dr 3545 ft.

MILLER COUNTY—C. J. Hodges et al's Commercial Nat. Bank 1, sw ne se 30-17-28, dk. King Oil Corp.'s E. G. Anderson 1, nw sw ne 16-14-27, dr 2570 ft. Lee Timberlake et al's Frost Lbr. Co. 1, sw sw se 27-15-26, sd 3097 ft.

MONROE COUNTY — Beaver Pet. Co.'s Hickman 1, sw se sw 27-4n-2w, dk.

NEVADA COUNTY—Carnett et al's Floyd Munn 1, 16-14-22, sd 50 ft.

OUACHITA COUNTY — Snow-Black Pet. Co.'s O. F. Wyman 1, n½ sw 36-11-16, 10-in csg 100 ft, Steele et al's Myar Est. 1, 16-13-18, sd 1320 ft.

SEVIER COUNTY—Pendleton & Vaughan's Fee 1, nw se 35-9s-30w, fresh water flow at 1170 ft, arr abd. J. E. Johnson 1, nw sw sw 35-9s-30w, lcn.

UNION COUNTY—Gulf Ref. Co.'s Werner Lbr. Co. 49, sw nw sw 5-16-16, 10-in csg 2293 ft, cemtd 7-in OD csg 6224 ft, after so, td 6431 ft, Big Lime. H. L. Hunt, Inc.'s E. F. Gregory 15, se se 10-17-14, elev 180.4 ft, 7-in csg 5834 ft, base red beds 5937 ft, top Permian salt 6816 ft, perf csg 3478 ft, 2000 ft fluid in hole, 80 percent water, arr blow with air at 3478 ft, old td 6911 ft, Permian salt. Mrs. R. K. Jones' J. Davis 1, nw nw 28-16-14, 6⅝-in csg 2746 ft, dr 3170 ft. Joe Modisett et al's D. G. Sturdivant 1, se se 6-18-13, sd 4016 ft, sandy shale. E. O. Olds' Telford 1, nw nw 35-17-15, wosr, td 2211 ft.

MISSISSIPPI

BOLIVAR COUNTY—White & Jones' Ballou 1, ne ne 18-24n-7w, dr 805 ft.

CLARKE COUNTY—L. Beckwith et al's Long-Bell 1, sw se 10-2n-16e, ru and sd.

MADISON COUNTY—Cleve Love et al's P. F. Simpson 1, nw nw 30-8n-1w, lcn.

MONROE COUNTY—P. J. McAlpine et al's Crook 1, ne ne 4-13s-18w, resetting csg, td 2531 ft.

RANKIN COUNTY—Cleve Love et al's Ascher 1, nw ne ne 18-5n-2e spd.

SIMPSON COUNTY—Berry Corp.'s R. T. Berry 2, sw sw 33-2n-4e, sd 2632 ft.

STONE COUNTY—Gulf Ref. Co.'s Dantzler Lbr. Co. 7, elev 170 ft, dr 7212 ft.

WARREN COUNTY—Harry W. Elliott's R. L. Parker 2, nw nw 14-14n-1e, sd high water 1602 ft.

WASHINGTON COUNTY — Mid-Continent Developments' Lee 1, 33-15n-8w, arr lub hung 4-in drill pipe, td 2052 ft, rock.

WINSTON COUNTY—Jack Vale's Moody 1, sw nw sw 3-13n-14e, elev 540 ft, top Eutaw 1826 ft, dr 1850 ft green sand.

ALABAMA

BALDWIN COUNTY — Mrs. Mamie McCurry et al's Southern Kraft Co. 1, nw ne sw 28-2s-4e, rur.

COVINGTON COUNTY—Geometer Prod. Co.'s A. B. Culbreth 1, sw sw ne 8-2n-14e, arr make ds test, td 6104 ft brown sand.

HOUSTON COUNTY — Rice O&G Co.'s Oakley Est. 1, sw ne sw 9-3n-29e, sd 2772 ft rock.

LAMAR COUNTY — DeSoto O&G Co.'s Gardner 1, nw nw 22-15s-16w, dr 4323 ft hd lime.

FLORIDA

HILLSBOROUGH COUNTY— Southern Pet. Co.'s Mizell & Williams 1, 4-32s-25e, elev 120 ft, co td 2100 ft.

LAKE COUNTY—Oil Dev. Co. of Fla.'s Gulf Expl. Co. 1, se se 17-24s-25e, running csg to shut off water and cavities, 631 ft.

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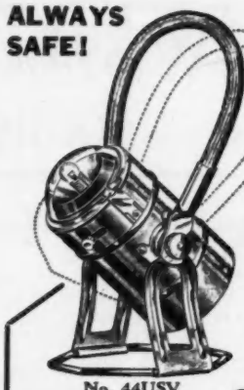
FOCUSES
TILTS
PIVOTS



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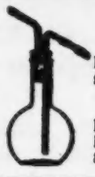

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NEWS *from the* *Industry's* EQUIPMENT MAKERS

Continental-Emsco to Export B S & B Line

Black, Sivalls & Bryson, Oklahoma City, has concluded arrangements with Continental-Emsco Company, 30 Rockefeller Plaza, New York City, to handle its line of separators, flow treaters, safety heads and other products in the export field. Such an arrangement gives Black, Sivalls & Bryson direct representation in Buenos Aires, Venezuela, Trinidad, London and Roumania.

Thomas J. Kegg Named Factory Representative for Champion

The Champion Rivet Company, of Cleveland, Ohio, has announced the appointment of Thomas J. Kegg as direct factory representative on welding electrodes in the southwest, with headquarters at Sawyer and Winter Streets, Houston, Texas. Mr. Kegg has been assistant sales manager of The Champion Rivet Company in charge of welding electrode sales for the past four years.

Jon R. Long Appointed Exner-Dodge Packer Co. Distributor

Jon R. Long of Fort Worth has been appointed sales representative in Texas and distributor for the products of Exner-Dodge Packer Company of Coffeyville, Kansas. A complete stock of packers is carried in Fort Worth.

The Medart Company Appoints Transmission Distributor

The Medart Company, St. Louis, Mo., has appointed English Brothers Machinery Company, Kansas City, Mo., as distributor for its line of transmission equipment in that area.

World Distance Record Made by Diesel Tanker

With her Diesel engines running continuously from Texas to India and then back to California, the motorship "Daylight" recently made what is said to be the world's longest non-stop voyage for a Diesel-driven vessel. Although head seas and head winds caused a 13.3 percent propeller slip, the average speed was 10.1 knots per hour.

The oil tanker that established this distance record is owned and operated by Socony-Vacuum Oil Company of New York. A 3200-horsepower Sun-Doxford Diesel main engine is accompanied by a pair of 120-horsepower Cooper-Bessemer Diesel generator sets. Despite the large total of Diesel horsepower, the fuel consumption is low. More than enough fuel oil can be carried to take the ship around the world, and at the same time not encroach very seriously on payload capacity.

After the first leg of the journey, to Bombay, when the engines were stopped, after running 51½ consecutive days and traveling 12,497 nautical miles, only a few minor adjustments were required. The return trip required only 42 days. Only 11 gallons of lubricating oil were used per 24-hour service, including all auxiliaries.

Spang-Chalfant Sales Manager Dies in Accident

Lawrence L. Minor, Jr., one of the best-known pipe men in the United States, director and sales manager of Spang, Chalfant & Company, Inc., died May 29, in Pittsburgh, from injuries suffered in an automobile accident a few days previous.

Mr. Minor was born in Uniontown, Pennsylvania, on June 19, 1887, and received his college education at Virginia Military Institute. He became identified with the steel industry at the age of 22, when he came to Pittsburgh and entered Spang, Chalfant & Company's employ. Practically his entire business life has been spent with that firm, working his way up from the mill to the position held at his death.

WALTER H. WIEWEL has been appointed manager of sales, tubular products, of Jones & Laughlin Steel Corporation effective June 1, to fill the vacancy recently created by the death of F. D. Grunder who held that position since 1916. Mr. Wiewel has since 1932 been manager of tube sales of Timken Steel and Tube Company of Canton, Ohio. He was first employed in 1910 by the Cambria Steel Company in its Cleveland office. In 1914 he became associated with United Steel Company, Canton, Ohio, and in 1918 was appointed assistant general manager of sales of the successor company, United Alloy Steel Corporation. He was appointed manager of the New York district office of the Standard Seamless Tube Company in 1925 and later joined Timken Steel & Tube Company.

R. E. (BOB) HARRIS, who has been with the Guiberson Corporation for 15 years, has accepted a position as vice president in charge of sales with the Parrish Tool Corporation, Dallas, Texas.

CATALOGUES *and* BULLETINS

Piston Rings

American Hammered Piston Ring Company, Baltimore, Md., has issued an attractive Engineer's Handbook on piston rings. The book contains valuable engineering data in connection with the application of piston rings sold to the oil industry and also describes the various types of rings manufactured by the company. It is a case-bound book with an attractive cover, pocket size.

General Catalog

Oil Well Supply Company has issued its Oilwell No. 46 General Catalog, and it is now being distributed. This book is a comprehensive

catalog of the company's products. Of particular interest are the sections devoted to drilling and pumping equipment.

Handsomely bound in a black cover with the familiar Oilwell orange panels, the new catalog is a departure from the old size book. Although the book contains but 686 pages, the page size has been increased, almost a third more items are included than appear in the old No. 45 Catalog, and it makes a much more convenient book to handle.

Centrifugal Pumps

Worthington Pump and Machinery Corporation, Harrison, New Jersey, has issued Bulletin No. W-321-B2A, describing the "Monobloc" centrifugal pumps manufactured by the company. It will be mailed upon request.

Steel

Lukens Steel Company, Coatesville, Pa., has issued an eight page pictorial summary of the company's work and its subsidiaries, in the production of steel plates and fabrication of equipment.

Welding Machine

The Ideal Electric and Manufacturing Company, Mansfield, Ohio, has issued a bulletin describing the Noel "Speed Arc, High Efficiency, High Power Factor Welders."

Pumps

Quimby Pump Company, 340 Thomas Street, Newark, N. J., has available the following bulletins and catalogs: Bulletin C-110, Quimby centrifugal pumps; Bulletin C-111, Quimby Doty non-corroding pumps; No. C-102, Quimby Doty rubber lined pumps; No. R-114, Quimby Rotex pumps; No. S-104, Quimby Screw Pumps.

New Equipment for the Field

Machinery .... Tools .... Catalogs .... Books

▼ ▼ ▼

Drilling Machine

BUCYRUS-ERIE COMPANY

Bucyrus-Erie Company, South Milwaukee, Wisconsin, has announced a larger and more powerful portable drilling machine to meet the demand for a modern, all-steel wire line machine capable of drilling to more than 1500 feet, and starting up to 20-inch holes. The new model weights about 15,000 pounds, and may be mounted on a motor truck or heavy trailer. Regular steel-wheel mounting is available for use when moving with horses or tractors.

Tubing Cutter

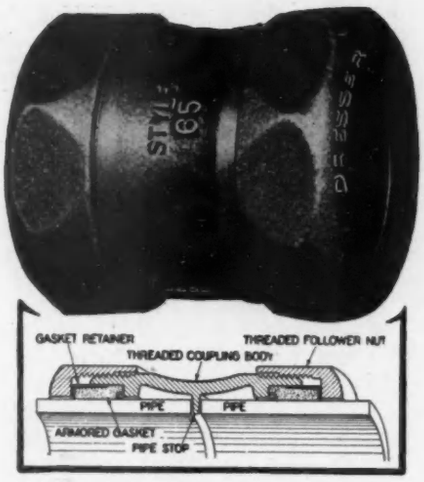
THE RIDGE TOOL COMPANY

The Ridge Tool Company, Elyria, Ohio, has announced a new and improved "Rigid" tubing cutter that combines both light weight and a good margin of strength. Made for one-fourth to one-inch tubing, the cutter weighs only 6¼ ounces and is 5½ inches long when set for one-fourth tubing. Sharp right angle cuts are assured because cutting wheel and V-pad remain at center of tubing, and solid screw saddle must move in a stright line. The snap-on V-pad of wear-proof spring steel irons out tubing smooth—ready for solder. It is equipped with integral reamer.

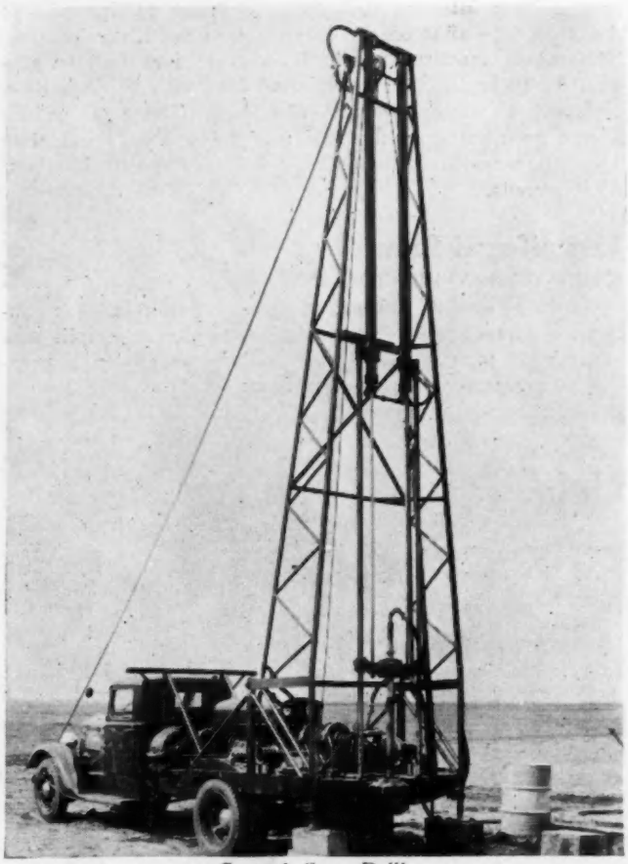
Pipe Coupling

S. R. DRESSER MANUFACTURING COMPANY

S. R. Dresser Manufacturing Company, Bradford, Pa., has introduced a new type pipe coupling for plain end pipe. The new coupling, which is a form of union, is a simple pipe joint that may be connected in a short time with a wrench. It consists of octagonal followers, gasket retainers, armored gaskets and coupling body. Making the joint involves inserting the pipe ends into the coupling (which comes assembled) and then tightening two threaded octagonal nuts with a wrench, the entire operation requiring a very short period.



Dresser Coupling



Central Core Drill

Core Drill

CENTRAL CORE DRILL MANUFACTURING COMPANY

Central Core Drill Manufacturing Company, Hutchinson, Kansas, has announced a new core drill, shot hole, and shallow production drill that has proved very efficient in field tests, according to the manufacturer. The drill is a newly designed, truck mounted drilling machine that was developed for the rapid drilling of blast holes in connection with the seismograph method of exploraton and survey, but the manufacturer recommends the outfit for deep core drilling and shallow production work. The unit consists chiefly of a drilling and hoisting combination, a circulating or slush pump, a power driven hoisting drum or winch, and a collapsible mast. These units are arranged for mounting on the platform of a motor truck and are driven by a gasoline engine mounted with the unit. The transmission has four forward speeds and one reverse gear.

The drilling and hoisting unit combines a hydraulic pressure feed, installed in the mast for forcing the Kelly through the rotary table, and a winch or hoisting drum mounted on the drill bed or frame for hoisting or lowering the drill pipe string or casing. The drilling spindle (Kelly) is 11 feet long and is rotated through a rotary table.

The hydraulic unit is a Roper hi-pressure pump of the

herringbone gear type, will develop a pressure of 750 pounds, and will deliver 56 gallons per minute. The mud pump will be furnished in either the 3½ x 5 or 4 x 6 size.

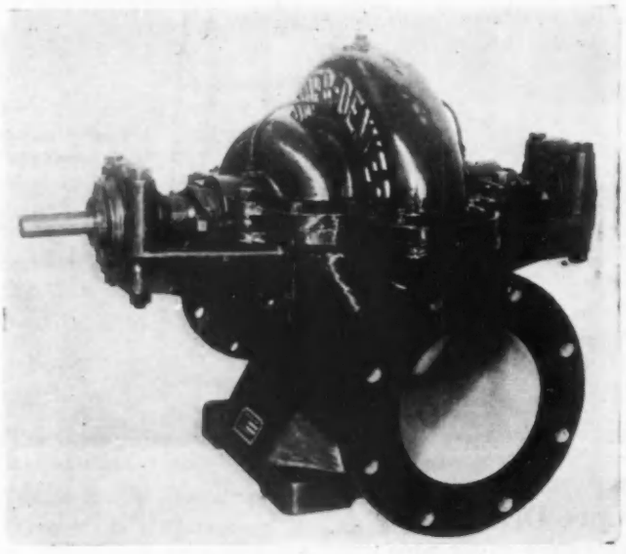
The mast is mounted on standards at the rear end of the truck frame and is hinged for folding back horizontally over the truck. The gasoline engine is the Ford V-8 motor with a four speed forward and one reverse gear transmission. The drive is by chain.

The rotary table is the company's own manufacture. When more room is needed, the rotary table may be moved back into the drill frame. When pulling out of the hole, pipe slips are used in place of the Kelly bushing. The motor mounted model is suitable for shallow production drilling to a depth of 2000 feet with six-inch hole, and will do coring work to 3500 feet. The total weight of the unit, based on the 1935 model V-8 Ford truck with 157-inch wheelbase, including truck and mast, is about 8500 pounds.

Centrifugal Pump

GARDNER-DENVER COMPANY

Gardner-Denver Company, Quincy, Illinois, has announce a new line of double-suction, single-stage, split case centrifugal pumps which the manufacturer claims combines a number of unusual features. The new line of



Gardner-Denver Centrifugal Pump

pumps is adaptable to all classes of service. All models are designed for any type of drive, including flat belt, V-belt, direct connected, gas or Diesel engine, and electric motor. The pumps cover heads up to 300 feet, but a wide variety of types are available.

Diesel Generator

HARNISCHFEGER CORPORATION
CATERPILLAR TRACTOR COMPANY

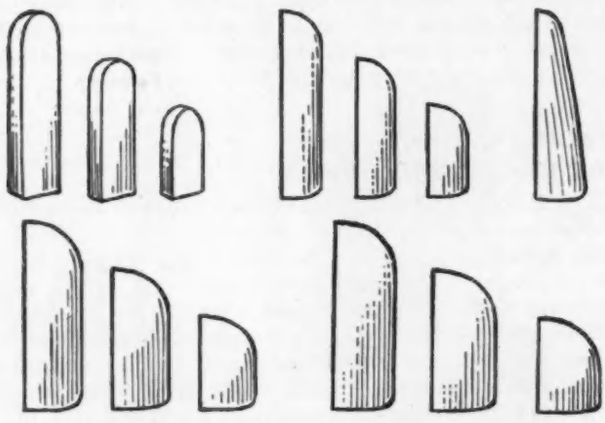
Harnischfeger-Caterpillar Diesel Generator

Harnischfeger Corporation, Milwaukee, Wisconsin, and Caterpillar Tractor Company, Peoria, Illinois, have announced the development of a new Diesel generator set that will be built co-operatively. The generator unit will be offered in capacities ranging from 35 to 60 KW to fill all AC and DC current requirements. Generators are of the single bearing type directly connected by link coupling to the Diesel engine, and mounted on a substantial cast iron base. The standard unit will include the engine with all auxiliaries, radiator cooling system, starting engine, auxiliary fuel pump, engine controls, coupling between engine and generator, flywheel and coupling guard, and the generator mounted on the unit base.

Hard Facing Metals

OSAGE METAL COMPANY

Osage Metal Company, Oklahoma City, Oklahoma, has announced the installation of special facilities that enable them to make "Osage" metal inserts in sizes to order. The



new manufacturing arrangement makes available to the oil industry a complete selection of inserts for all purposes. Illustrations show actual size of standard shape inserts.

Oil and Gas Developments Yearbook Published by Scouts

National Oil Scouts Association of America, Incorporated, announces recent completion by Gulf Publishing Company of Houston of the scouts' year book for 1935, copies of which are now available for distribution.

The year book, which has been characterized in the past by a thorough statistical and special article, and historical coverage of Louisiana and Texas, embraces in the 1935 edition New Mexico and Arkansas as well.

Special articles on current technical trends in these territories in the 1935 year book of the scouts include: "The Geology of the Gulf Coast Area of Texas and Louisiana," prepared by the geological department of Humble Oil & Refining Company; "The Reflection Seismograph," by Dr. E. E. Rosaire, president of Independent Exploration Company; "Aerial Photographic Mapping," by James Atkinson of the Edgar Tobin Surveys; and "Drilling Muds," by J. Vander Henst of Gulf Production Company.

Maps shown in conjunction with field and wildcat area development summaries for the 1934-35 period covered in the annual include: Southwest Texas, Samfordyce field; Texas Gulf Coast; Louisiana Gulf Coast. In addition to these, each field in the counties comprising states and districts covered in the year book is represented with a condensed development history; wildcat areas are covered by a resume of drilling results and lease activity.

Instructions for obtaining a copy of the 1935 edition of the year book may be obtained from Elton Rhine, Empire Gas & Fuel Company, 2703 Esperson Building, Houston, Texas.

Squeaks *from the* BULL WHEEL

"The girls out our way have formed a secret society."

"That's a laugh! Girls don't know how to keep secrets."

"But this society isn't to keep secrets; it's to tell them."

"Don't tell me your husband is divorcing you because of a slight misunderstanding?"

"Yes, I understood him to say he'd be out of town for a week."

"Why don't you buy one of those knee-action cars?"

"I have so much trouble keeping this old flivver in the road with both hands, I know I couldn't drive one with my knees."

A Wisconsin woman who owns some land near Rio Hondo was "insulted" by an oil scout recently when he wrote her regarding the leasing of her land for "wildcat purposes."

She wrote an indignant letter declaring that there were no wildcats on her land. "This land was bought for good land, taxes have been paid on it as good land, and it is good land," she wrote, "with no wildcats on it."

"What's all this?" asked the professor.

"Those are my Mae West problems," explained the student.

"Mae West?"

"Yeah, I done 'em wrong."

Binks bought a new shirt, and on a piece of paper pinned to the inside found the name and address of a girl, with the words, "Please write and send photo." Scenting a romance, he wrote to the girl and sent his photo.

In due course he received a reply. It was only a note. "My chum and I had a bet on," it read, "as to what sort of a fellow would wear a shirt like that. My chum said a dude, I said a shrimp, and I'm glad to say I won."

The preacher was out on the links and thought a small moral lesson might not be amiss.

"I notice," he remarked mildly, "that the players who get the lowest scores are not those who swear."

"What the h—l have they to swear about?" snorted the glooming golfer as he dug up another slice of turf .

"Why does a woman say she's been shopping when she hasn't bought a thing?"

"Why does a man say he's been fishing when he hasn't caught anything?"

"I want a shave," said the disgruntled sergeant as he climbed into the barber's chair. "No haircut, no shampoo, no rum, witchhazel, hair tonic, hot towels, or face massage. I don't want the manicurist to hold my hand, nor the bootblack to handle my feet. I don't want to be brushed off, and I'll put on my coat myself. I just want a plain shave, with no trimmings. Understand that?"

"Yes, sir," said the barber quietly. "Lather, sir?"

"Your husband looks like a brilliant man. I suppose he knows everyhting."

"Don't fool yourself; he doesn't even suspect anything."

Here lies entombed old Roger Morton,
Whose sudden death was oddly brought on
Trying one day his corn to mow off,
His razor slipped and cut his toe off,
His toe, or rather what it grew to,
An inflamation quickly flew to;
The member took to mortifying,
And poor old Roger took to dying.

"It isn't that I'm afraid to work, ma'am, but there ain't much doing in my particular line."

"Why, what are you?"

"A window-box weeder, ma'am."

That platinum blonde over there has a record that can't be beat.

What is it?

She has a divorce that's good in every state in the union.

The Scotch patient was fumbling in his pocket.

"You don't need to pay me in advance," said the dentist.

"I'm no going to," was the reply. "I'm only counting ma money before you give me the gas."

"There never was but one guest at this hotel that stung me while I was on the job," the landlord confided. "Several have beat us, but not while I was awake. But this here feller certainly got one on me. Say, he's livin' here yet, an' he ain't never paid me a cent. Why don't I collect his bill? How can I? Wait till I tell you.

"He'd been stoppin' here for nearly two months, when I approached him on the subject of gettin' something on account. He was cheerful. I was polite. Finally I got mad, and put it to him straight.

"'Young man,' says I, 'you can't leave this hotel till you pay your bill.'

"'Will you put that in writing?' says he.

"And before I knew what I was doin', I done it."

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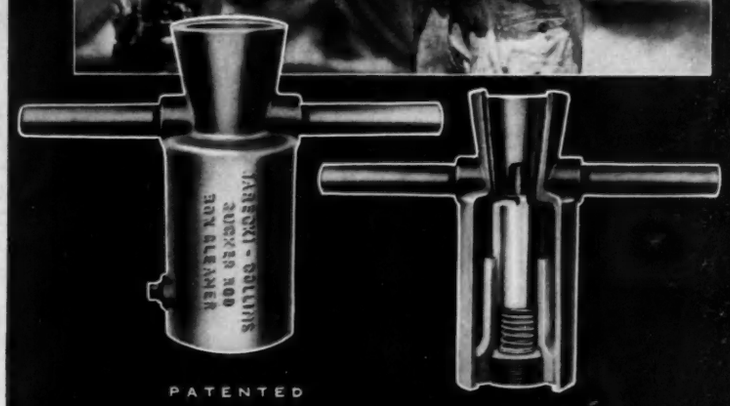
This is a very useful tool for removing sand, grit, or dirt from the box or coupling threads of sucker rods in order to insure tight properly made-up joints. May also be used as a thread lubricator.

Raising and lowering the Cleaner under the box or coupling-end of the rod actuates a plunger which jets the cleaning fluid—oil and kerosene—against the threads, effectively flushing out all foreign matter. Entirely self-contained, automatic in operation, and practically indestructible.

Use of the Jarecki-Collins Sucker-Rod Box Cleaner will reduce pin breaks.

(Completely described in Bulletin No. 2)



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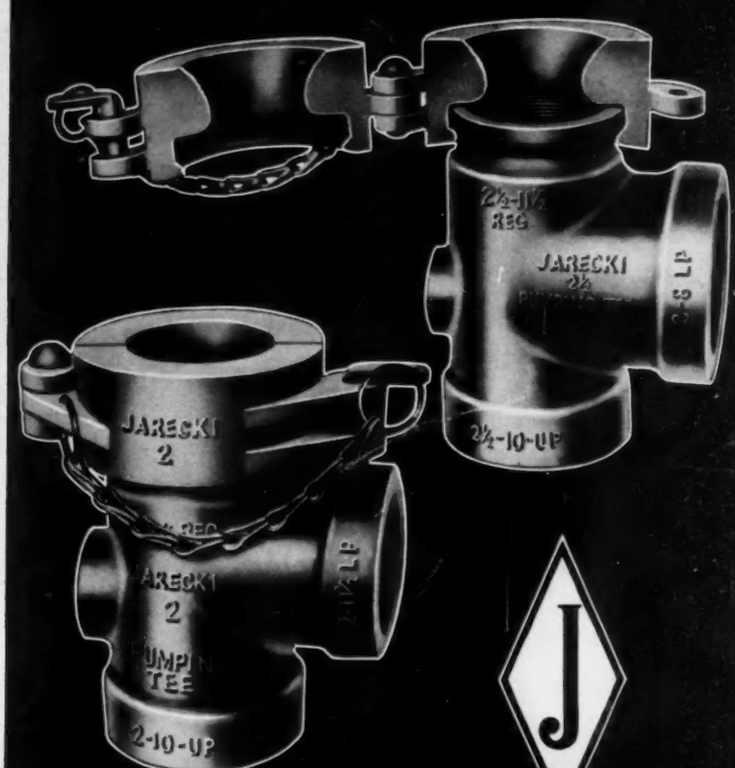
An improved sucker-rod guide which clamps around the tee, causing the weight of the rods to be carried by the body of the tee, instead of by the threads, thus saving the tee threads from wear. Also, there are no threads on this bell nipple to wear out. Provides a wide, flat, level support for rod elevators. Fits any standard malleable tee, as well as the Jarecki Pumping Tee.

(Completely described in Bulletin No. 3)

JARECKI PUMPING TEE

The Jarecki Pumping Tee is a heavy malleable fitting especially designed to connect the tubing, flow line, stuffing box, and bleeder line of a pumping well. All sub-nipples, swage nipples, and bushings are eliminated. Made for all tubing sizes, with all thread sizes marked. The Jarecki Threadless Hinged Bell Nipple may be attached directly to the Jarecki Pumping Tee.

(Completely described in Bulletin No. 1)



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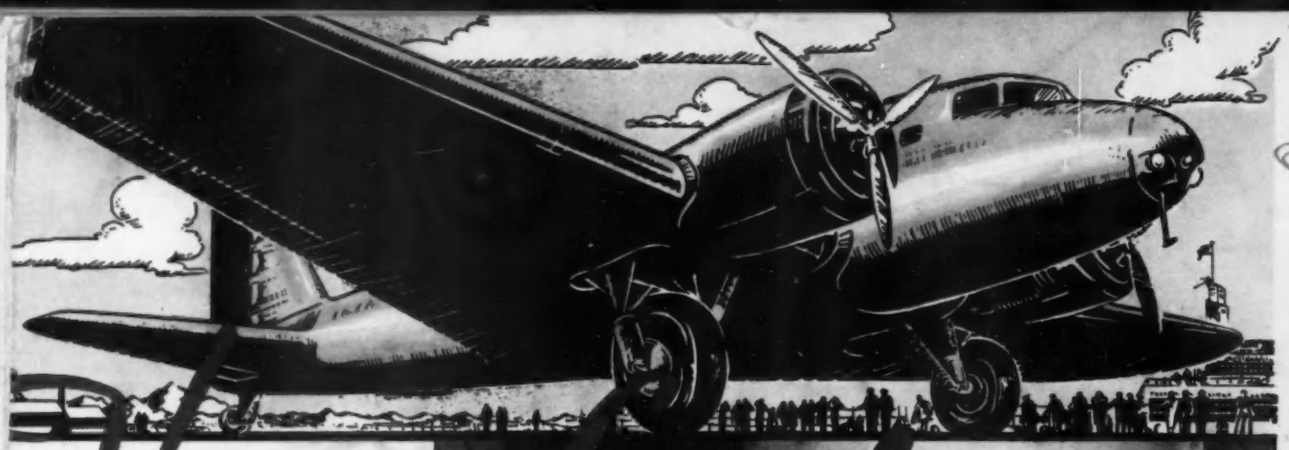

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Just as the giant air liner glides to a three-point landing, Baker Cement Equipment will insure Happy Landings of your strings of casing.

STRENGTH

Whether it is a Baker Cement Float Shoe, Whirler Shoe, or a Float Collar and Guide Shoe combination, each unit is stronger than the collapsing strength of your casing—safe for strings of ANY length.

VALVE EFFICIENCY

The Bakelite Ball Valve floats in rotary mud or cement slurry, makes instant contact with the rubber valve seat and insures a leak-proof seal at the slightest reversal of pressure. The rubber seal is backed up by a Bakelite seat thereby providing a double seal which will withstand any back-pressure encountered.

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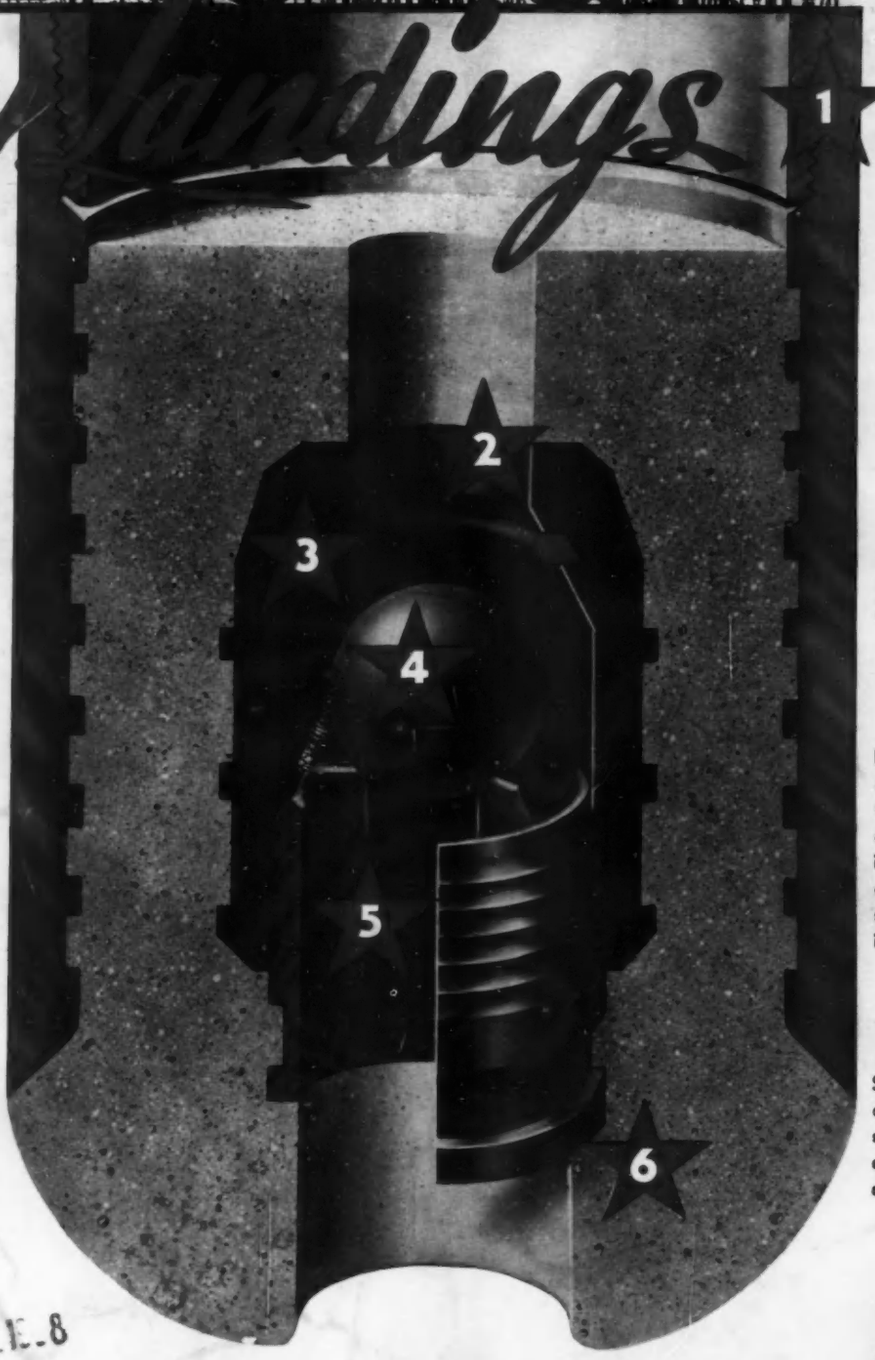
And the final VITAL feature is the internal construction of special formula concrete and bakelite, which drills out easily and circulates away, leaving the hole ready for further drilling—or immediate coring—entirely free from dangerous metal or other objectionable material.



1 Accurately machi threads insure of making-up.

2 Bakelite seat re forces rubber sea

3 Rubber seat provi leakproof sealing.

4 Buoyant Bakelite floats in rotary m or cement slurry.

5 Large circulati area is provid through the va chamber, and a m imum vertical secti of Bakelite is pr sented to the dri ing bit.

6 Special-formula co crete is strong a safe but drills easily and circulat out of the hole.

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